Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Rayonier, Inc.**	
2. Site Name: **Fernandina Dissolving Sulfite Mill**	
3. Facility Identification Number: **31JAX450004** [Unknown]	
4. Facility Location: Street Address or Other Locator: **Foot of Gum Street** City: **Fernandina Beach** County: **Nassau** Zip Code: **32035-1309**	
5. Relocatable Facility? [ ] Yes [**X**] No	6. Existing Permitted Facility? [**X**] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **David E. Tudor, Mgr. Env. Affairs – Air**
2. Application Contact Mailing Address: **P. O. Box 2002** Organization/Firm: **Rayonier, Inc.** Street Address: **Foot of Gum Street** City: **Fernandina Beach** State: **FL** Zip Code: **32035**
3. Application Contact Telephone Numbers: Telephone: (**904**) **277-1452** Fax: (**904**) **277-1411**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[X] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:____________________

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:____________________

Operation permit number to be revised:____________________

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:____________________

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:____________________

Reason for revision:____________________

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1.	Name and Title of Owner/Authorized Representative or Responsible Official: **W. M. Burch, General Manager**
2.	Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: **Rayonier, Inc.** Street Address: **P. O. Box 2002** City: **Fernandina Beach** State: **FL** Zip Code: **32035**
3.	Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: **(904)277-1410** Fax: **(904)277-1411**
4.	Owner/Authorized Representative or Responsible Official Statement: *I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.* Kathleen [illegible] for W. M. Burch 6/5/03 Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1.	Professional Engineer Name: **David A. Buff** Registration Number: **19011**
2.	Professional Engineer Mailing Address: Organization/Firm: **Golder Associates Inc.*** Street Address: **6241 NW 23rd Street, Suite 500** City: **Gainesville** State: **FL** Zip Code: **32653**
3.	Professional Engineer Telephone Numbers: Telephone: **(352) 336 - 5600** Fax: **(352) 336-6603**

****Board of Professional Engineers Certification of Authorization #00001670**

Kathy Wolfla

06/06/2003 02:35 PM

To: Tricia.Harrell@rayonier.com
cc:
Subject: Signing Authority

----- Forwarded by Kathy Wolfla/RayFB/Rayonier on 06/06/03 02:35 PM -----

Mike Burch

05/29/03 04:20 PM

To: Kathy.Wolfla@rayonier.com, Stewart.Pikula@rayonier.com, Dick.Hopper@rayonier.com, Matt.Mandeville@rayonier.com, Kellin.Anderson@rayonier.com, Jeff.Scott@rayonier.com, Greg.Jones@rayonier.com, John.Jones@rayonier.com, Amy.Lemery@rayonier.com, ca.mcdonald@rayonier.com, Rhonda.Blake@rayonier.com
cc: Paul.Boynton@rayonier.com
Subject: Signing Authority

I plan to be on vacation the week of 6/2/03. I will be in and out of town during the week but can be reached on my cell phone or at home. You should try both and leave messages in both locations should you wish to contact me. Kellin Anderson will carry my operational responsibility and share my signing authority with Kathy Wolfla with the exception of PAR capital. Only emergency PAR capital should be authorized in my absence. Small capital authorizations can be approved by CA McDonald during my absence.

Phone #'s — Home 904 261 8556
Cell 904 742 8622

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

*If the purpose of this application is to obtain a Title V source air operation permit (check here [***X** *], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff

Signature

(seal)

6/5/03

Date

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
B1	No. 1 Power Boiler	N/A	N/A
B2	No. 2 Power Boiler	N/A	N/A
B3	No. 3 Power Boiler	N/A	N/A
MS	Molten Sulfur Handling System	N/A	N/A
RB	Recovery Boiler Stack	N/A	N/A
VS	Vent Gas Scrubber Stack	N/A	N/A
EV	Evaporator NonCondensible Emissions	N/A	N/A
WT	Wastewater Collection and Treatment Emission Points	N/A	N/A
BL	Unregulated Bleach Plant Emission Points	N/A	N/A
CD	Unregulated Chlorine Dioxide Plant Emission Points	N/A	N/A
MF	Unregulated Machine & Finishing Emission Points	N/A	N/A
EN	Unregulated Environmental Emission Points	N/A	N/A
PG	Unregulated Pulping Area Emissions Points	N/A	N/A
SC	Unregulated Screening Area Emission Points	N/A	N/A
UT	Unregulated Utility Area Emission Points	N/A	N/A
WY	Unregulated Woodyard Emission Points	N/A	N/A
LF	Unregulated Waste Water Solids Monofill Emissions	N/A	N/A

Application Processing Fee

Check one: [ ] Attached - Amount: $____________________ [X] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations: **Not applicable – No new construction proposed**
2. Projected or Actual Date of Commencement of Construction: **N/A**
3. Projected Date of Completion of Construction: **N/A**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17**	East (km): **454.7**	North (km): **3392.2**	
2. Facility Latitude/Longitude: **N/A** Latitude (DD/MM/SS):	Longitude (DD/MM/SS):		
3. Governmental Facility Code: **C**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **26**	6. Facility SIC(s): **2611**
7. Facility Comment (limit to 500 characters): **This facility extracts cellulose from fibrous sources using processes similar to the sulfite pulping process.**			

Facility Contact

1. Name and Title of Facility Contact: **Richard Hopper, Manager, Environmental Operations**		
2. Facility Contact Mailing Address: Organization/Firm: **Rayonier, Inc.** Street Address: **Post Office Box 2002** City: **Fernandina Beach**	State: **Florida**	Zip Code: **32035-1339**
3. Facility Contact Telephone Numbers: Telephone: (**904**) **277-1480**	Fax: (**904**) **277-1411**	

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [X] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [X] One or More Emissions Units Subject to NSPS?	
7. [X] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	

List of Applicable Regulations

See Attachment 2	

B. FACILITY POLLUTANTS

List of Pollutants Emitted See Attachment 3 for list. No Caps are requested.

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID:__4____ [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID:__5____ [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID:__6____ [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID:__7____ [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [X] Attached, Document ID:__8____ [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID:________ [X] Not Applicable
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: [X] Attached, Document ID:__9____ [ ] Not Applicable	
9. List of Equipment/Activities Regulated under Title VI: [X] Attached, Document ID:___10___ [ ] Equipment/Activities On site but Not Required to be Individually Listed [ ] Not Applicable	
10. Alternative Methods of Operation: [X] Attached, Document ID:___11___ [ ] Not Applicable	
11. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID:________ [X] Not Applicable	
12. Identification of Additional Applicable Requirements: [ ] Attached, Document ID:________ [X] Not Applicable	
13. Risk Management Plan Verification: [X] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:__12____) or previously submitted to DEP (Date and DEP Office:________________________) [ ] Plan to be submitted to CEPPO (Date required:____________________________) [ ] Not Applicable	
14. Compliance Report and Plan: [X] Attached, Document ID:__33____ [ ] Not Applicable	
15. Compliance Certification (Hard-copy Required): [X] Attached, Document ID:__13____ [ ] Not Applicable	

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
This is an oil fired boiler.

4. Emissions Unit Identification Number: **001**
ID: **B1**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	[**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Wet venturi scrubber**
2. Control Device or Method Code(s): **053**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**185**	mmBTU/hr
2. Maximum Incineration Rate:	lb/hr	**N/A**	tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **N/A**			
5. Requested Maximum Operating Schedule:			
	24 hours/day		**7** days/week
	52 weeks/year		**24** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **(120,000 lb. steam/hr) X (1/0.65 efficiency) = 185 MMBTU/hr**			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Rayonier Core List of Rules applying to entire facility. See Attachment 2.	
FAC 62-296.410(1)(b)	
FAC 62-29710	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)(c)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **B1 – Stack A**	2. Emission Point Type Code: **2**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **No. 1 oil fired power boiler combines exhaust gases with No. 2 oil and wood fired boiler, and rarely No. 3 oil and wood fired boiler.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 5. **B1, B2, B3**		
5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **136** °F	9. Actual Volumetric Flow Rate: **136,700** acfm	10. Water Vapor: **17.8** %
11. Maximum Dry Standard Flow Rate: **106,000** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1__ of __1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No.6 oil fired in boiler (emissions related to thousands of gallons burned)**		
2. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **thousands gallons burned**	
4. Maximum Hourly Rate: **1.23**	5. Maximum Annual Rate: **10,804**	6. Estimated Annual Activity Factor: **N/A**
6. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **0.03**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **185 mmBTU/hr x 1 gal/0.15 mmBTU/1000 = 1.23 kgal/hr**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	053	N/A	EL
SO2	N/A	N/A	EL
CO	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H113 manganese	N/A	N/A	NS
HAPs	NA	NA	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **16.0** lb/hour **70.1** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **0.086 lb/mmBTU** Reference: **FAC 62-296.410(2) adjusted to maintain existing mass emissions with increased heat ratio**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(16 lb/hr)/185 mmBTU/hr) = 0.086 lb/mmBTU** **(16.0 lb/hr) x (8760 hr/yr) x (1/2000 ton/lb) = 70.1 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _1___ of __1___

1. Basis for Allowable Emissions Code: Other	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **0.086 lb PM/mmBTU**	4. Equivalent Allowable Emissions: **16.0** lb/hour **70.1** tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **440** lb/hour **1848** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
5. Emission Factor: **2.37 lb/mmBTU from fossil fuel** Reference: **Para. 4 in Stipulation of March 10, 1982 adjusted for new heat input rate at same mass emissions**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(185 mmBTU/hr) x (2.37lb/mmBTU) = 440 lb/hr** **(440 lb/hr) x (8760 hr/yr) x (1/2000 ton/lb) = 1927.2 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **See permit No. AO45-183504. Annual emission is calculated on 8760 hr/yr as allowed in the permit. Stipulation seems to be based on 8400 hr/yr. If possible rebuild improves efficiency, emission factor may return to original 2.75 lb/mmBTU.**	

Allowable Emissions Allowable Emissions _**1**___ of __**1**___

1. Basis for Allowable Emissions Code: **other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.37 lb SO2/mmBTU from fossil fuel**	6. Equivalent Allowable Emissions: **440** lb/hour **1848** tons/year
5. Method of Compliance (limit to 60 characters): **fuel analysis and fuel usage measurements**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **See Stipulation of May 10, 1982 and subsequent Order of April 5, 1982 adjusted to maintain same mass emission rate at new heat input rate, and based on 8760 hr/yr. See comment page 19 regarding annual emissions and boiler rebuild or replacement.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1___ of __1___

1. Visible Emissions Subtype: **VE30**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40** % Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Wet scrubber on stack. Rule basis for allowable Opacity is FAC 62-296.410(1)(b)(1).**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No continuous emission monitors are required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_14_____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID:__15____ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__16____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID:__17____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [X] Attached, Document ID:__18____ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [X] Attached, Document ID:___19___ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
No. 2 oil and wood fired boiler

4. Emissions Unit Identification Number: **002**
ID: **B2**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Multiclones followed by wet venturi scrubber**
2. Control Device or Method Code(s): **076 and 053**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**218**	mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:	**24** hours/day **52** weeks/year	**7** days/week **8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This is a combination fuel oil and wood power boiler rated at 120,000 lb steam per hour. The heat input rate on No.6 fuel oil is 184 mmBTU/hr at 65% efficiency and on wood waste is 218 mmBTU/hr at 55% efficiency.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Rayonier Core List of Rules applying to entire facility. See Attachment 2.	
FAC 62-296.410(1)(b)	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **B2 stack A**	2. Emission Point Type Code: **2**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **No. 1 oil fired power boiler, No. 2 oil and wood fired power boiler, and rarely No. 3 oil and wood fired power boiler.**

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
B1 - No. 1 power boiler
B2 - No. 2 power boiler
B3 - No. 3 power boiler

5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **136** °F	9. Actual Volumetric Flow Rate: **136,700** acfm	10. Water Vapor: **17.8** %

11. Maximum Dry Standard Flow Rate: **106,000** dscfm	12. Nonstack Emission Point Height: **N/A** feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **454.7** North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1__ of __2__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No. 6 oil fired in boiler (emissions related to thousands of gallons burned)**		
2. Source Classification Code (SCC): **1-02-009-02**	3. SCC Units: **thousand gallons burned**	
4. Maximum Hourly Rate: **1.23**	5. Maximum Annual Rate: **10,774**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **0.03**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **184 mmBTU/hr x 1 gal/0.15 mmBTU/1000 = 1.23 thousand gallons/hr**		

Segment Description and Rate: Segment __2__ of __2__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **hogged fuel fired combination boiler (emissions related to tons of fuel burned)**		
2. Source Classification Code (SCC): **10300902**	3. SCC Units: **tons of fuel burned**	
4. Maximum Hourly Rate: **24.2**	5. Maximum Annual Rate: **212,186**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment (limit to 200 characters): **See Permit No. AO45-183506. Basis of calculation is as-is tons.** **218 mmBTU/hr x 1 ton/9mmBTU = 24.2 tons/hr**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	076	053	EL
SO2	N/A	N/A	EL
CO	N/A	N/A	NS
NOx	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 (methanol)	N/A	N/A	NS
H113 (manganese)	N/A	N/A	NS
H043 (chloroform)	N/A	N/A	NS
HAPs	NA	NA	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **50.6** lb/hour **212.5** tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **0.23 lb/mmBTU** Reference: **Paragraph 3 of Stipulation dated March 10, 1982 and subsequent Order dated April 5, 1982 Permit No. AO45-183506.**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(120,000 lb steam/hr) x (1/0.55 efficiency) = 218 mmBTU/hr** **(218 mmBTU/hr)x(0.23 lb/mmBTU) = 50.6 lbs. PM/hr** **(50.6 lb/hr) x (8760 hr/yr) x (1/2000 ton/lb) = 221.6 tons PM/yr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Hog fuel is used in potential emissions determination. Boiler is also limited to 185 mmBTU/hr of No. 6 fuel oil and emissions of 15.2 lb/hr [or 0.086 lb/mmBTU] and 66.5 tons PM/yr. Emissions factor has been adjusted to maintain same mass emission rate with increased heat input rate.**	

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **50.6** lb/hour **212.5** tons/year
5. Method of Compliance (limit to 60 characters): **annual stack test**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Annual emissions are adjusted to reflect those in the Stipulation.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **418** lb/hour **1756** tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.26 lb/mmBTU from fossil fuel** Reference: **Paragraph 4 of March 10, 1982 Stipulation and subsequent April 5, 1982 Order adjusted for increased heat input @ same mass emission.**	7. Emissions Method Code: **0**

8. Calculation of Emissions (limit to 600 characters):

(120,000 lb steam/hr) x (1/0.65 efficiency) = 184 mmBTU/hr

(185 mmBTU/hr)x(2.26 lb/mmBTU) = 418 lbs. SO_2/hr.

(418 lbs./hr) x (8760 hr/yr) x (1/2000 ton/lb) = 1830.8 tons SO_2/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **See permit No. AO45-183504. Annual emission is calculated on 8760 hr/yr as allowed in the permit. Stipulation seems to be based on 8400 hr/yr. If possible rebuild improves efficiency, emission factor may return to original 2.75 lb/mmBTU.**

Allowable Emissions Allowable Emissions ___**1**___ of __**1**____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **418** lb/hour **1756** tons/year

5. Method of Compliance (limit to 60 characters): **annual stack test**

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):
Annual emissions are adjusted to reflect those in the Stipulation.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE30**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40**% Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Wet Scrubber on Stack. Rule Basis is FAC 62-296.410(1)(b)(1)**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **No continuous monitor required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:___**14**___ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:___**15**___ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:__ **16**___ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:__ **17**___ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [**X**] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [**X**] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [**X**] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [**X**] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [**X**] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [X] Attached, Document ID:__18____ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [X] Attached, Document ID:__19____ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Oil- and wood-fired boiler

4. Emissions Unit Identification Number: **003** [ ] No ID
ID: **B3** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	[**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Multi-clone followed by wet venturi scrubber**
2. Control Device or Method Code(s): **076 and 053**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**245** mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

This is a combination fuel oil and wood waste power boiler rated at 135,000 lb. steam/hr. The heat input rate on No. 6 fuel oil is 207 mmBTU at 65% efficiency and in wood waste is 245 mmBTU/hr at 55% efficiency.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Rayonier Core List of Rules applying to entire facility. See Attachment 2	
FAC 62-296.410(1)(b)	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **B3, Stack B**	2. Emission Point Type Code: **2**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Stack B, at times combined with other boilers and Stack A.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **B1 – No. 1 boiler** **B2 – No. 2 boiler** **B3 – No. 3 boiler**		
5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **141** °F	9. Actual Volumetric Flow Rate: **120,600**acfm	10. Water Vapor: **20** %
11. Maximum Dry Standard Flow Rate: **95,000**dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No. 6 oil fired in boiler (emissions related to thousands of gallons burned)**		
2. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **Thousand gallons burned**	
4. Maximum Hourly Rate: **1.38**	5. Maximum Annual Rate: **12,088.8**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **0.03**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **(207 mmBTU/hr) / (0.15 mmBTU/gal)(1/1000) = 1.38 kgal/hr.**		

Segment Description and Rate: Segment __**2**___ of __**2**___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Hogged fuel burned in boiler = emission related to tons burned**		
2. Source Classification Code (SCC): **1-02-009-02**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **27.2**	5. Maximum Annual Rate: **238,467**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment (limit to 200 characters): **(245 mmBTU/hr) / (9 mmBTU/ton)(8760 hr/yr) = 238,467 tons hog fuel/yr.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	076	053	EL
SO2	N/A	N/A	EL
CO	N/A	N/A	NS
NOx	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 (methanol)	N/A	N/A	NS
H113 (manganese)	N/A	N/A	NS
H043 (chloroform)	N/A	N/A	NS
HAPs	NA	NA	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **50.6** lb/hour **212.6** tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **0.207** Reference: **Paragraph 3 of stipulation of March 10, 1982 and subsequent April 5, 1982 Order adjusted.**	7. Emissions Method Code: **O**

8. Calculation of Emissions (limit to 600 characters):

(135,000 lb.steam/hr)(1/0.55 eff) = 245 MMBTU/hr

(0.207 lb/mmBTU)(245 mmBTU/hr) = 50.6 lb/hr

(50.6 lb/hr)(8760 hr/yr)(1/2000 ton/lb) = 221.6 tons/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

The emissions factor is adjusted to maintain the same mass emission rate with an increase in heat input rate.

Allowable Emissions Allowable Emissions __1____ of __2____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **50.6** lb/hour **212.6** tons/year

5. Method of Compliance (limit to 60 characters):

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):
Annual emissions are adjusted to reflect those in the Stipulation.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **459** lb/hour **1928** tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.21 lb/mmBTU from oil fuel** Reference: **Paragraph 4 of stipulation of March 10, 1982 and subsequent April 5, 1982 Order adjusted.**	7. Emissions Method Code: **O**

8. Calculation of Emissions (limit to 600 characters):

(135,000 lb.steam/hr)(1/0.65 eff.) = 208 MMBTU/hr

(208 lb/mmBTU)(2.21 mmBTU/hr) = 459 lb/hr

(459 lb/hr)(8760 hr/yr)(1/2000 ton/lb) = 2010.4 tons/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions __1____ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.21 lb/mmBTU**	4. Equivalent Allowable Emissions: **459** lb/hour **1928** tons/year

5. Method of Compliance (limit to 60 characters):

Fuel analysis and fuel usage measurements

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):
Annual emissions have been adjusted to reflect those in the Stipulation.

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **VE30**	2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40** % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Rule Basis in FAX 62-296.410(1)(b)(1)**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:__14____ [ ] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [ ] Attached, Document ID:__15___ [ ] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [ ] Attached, Document ID:__16___ [ ] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:__17____ [ ] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [X] Attached, Document ID:__18____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:___19___ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[**X**] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 4 – molten sulfur handling area fugitive emissions – MS

4. Emissions Unit Identification Number: **007** [ ] No ID
ID: **MS** [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

This emission unit is regulated by Work Practice Standards only.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Work Practice Standards only.**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:	**24** hours/day **52** weeks/year	**7** days/week **8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This is not an emission limited emission unit. All the emissions are fugitive and controlled by work practices as specified in 62.296.411(1) FAC. Volume of molten sulfur storage tank is 55,000 gallons.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Rayonier Core List of rules applying to entire facility. See Attachment 2.	
FAC 62-212-600	
FAC 62-296-411(1)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **MS**	2. Emission Point Type Code: **4**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Molten sulfur storage tank vent and rail car loading containment area.**

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **AP003**

5. Discharge Type Code: **F**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **77**°F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %

11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **0** feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **454.7** North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Rail tank car unloading and storage of molten sulfur – unconfined fugitive emissions related to spills.**		
2. Source Classification Code (SCC): **none found**	3. SCC Units: **tons stored**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **400**
7. Maximum % Sulfur: **100%**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **The regulatory requirements for this source are designed to minimize unconfined particulate emissions by diking, cleanup, paving and recordkeeping. The regulation does not require emissions estimation nor monitoring.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	N/A	N/A	WP

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **This section is not applicable. This is not an emissions limited emissions unit.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __**1**____ of __**1**____

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __**1**____ of __**1**____

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20**% Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Basis is FAC 296.411(g)** **FAC 62-210.700(1) allows periods of excess emissions for startup, shutdown and malfunctions for period not to exceed 2 hours in any 24-hour period.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __**1**___ of __**1**___

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No continuous emission monitor is required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__20____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 1 Recovery Boiler – RB

4. Emissions Unit Identification Number: **006**
ID: **RB**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
Tray type liquid scrubber which controls combustion gases from the boiler and noncondensible gases from the evaporators followed by a Brinks fiber type mist eliminator.

Brinks type mist eliminator for particulates – high velocity.

2. Control Device or Method Code(s): **051 and 014**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**653.1** mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **70,000 lb/hr of red liquor solids.**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:	**24** hours/day **52** weeks/year	**7** days/week **8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Ray. Core list of rules applying to entire facility. See Attachment 2.	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	
FAC 62-297.520(1)(b)	
FAC 62-204.800(10)(b)(28)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **RB**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **RB041 – Recovery Boiler Stack**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **V**	6. Stack Height: **264** feet	7. Exit Diameter: **7.33** feet
8. Exit Temperature: **126** °F	9. Actual Volumetric Flow Rate: **160,096** acfm	10. Water Vapor: **13.55**%
11. Maximum Dry Standard Flow Rate: **131,400** dscfm		12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Recovery system NH_3 – combustion of red liquor solids – emissions related to quantity of red liquor solids burned in boiler**		
2. Source Classification Code (SCC): **30700222**	3. SCC Units: **air dried tons unbleached pulp**	
4. Maximum Hourly Rate: **35.5**	5. Maximum Annual Rate: **310,980**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **20**
10. Segment Comment (limit to 200 characters): **(70,000 lb.SSLS/hr.)(8760 hr./yr.)(34.7 ADUBT/cook)/68,400 lb.SSLS/cook = 310,980 ADUBT/yr.**		

Segment Description and Rate: Segment __2___ of _2____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Recovery system NH_3 – combustion of Nr. 6 fuel oil in recovery boiler, emission related to quantity of oil burned.**		
2. Source Classification Code (SCC): **30790022**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **1.789 gpm**	5. Maximum Annual Rate: **15671.6**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5%**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	051	014	EL
SO_2	051	014	EL
PM10	051	014	NS
CO	N/A	N/A	NS
NO_X	N/A	N/A	NS
VOC	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H001 AcHO	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H186 m,p-xylene	N/A	N/A	NS
H187 o-xylene	N/A	N/A	NS
H163 syrene	N/A	N/A	NS
H124 trichlorobenzene	N/A	N/A	NS
H113 manganese	N/A	N/A	NS
H133 nickel	N/A	N/A	NS
H148 phosphorus	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **67.5** lb/hour **295.6**tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.5 lb PM/ADT UB Pulp** Reference: **Permit A045-171127 Specific Condition 4**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.5 lb/adtub pulp**	4. Equivalent Allowable Emissions: **67.5** lb/hour **295.6** tons/year
5. Method of Compliance (limit to 60 characters): **Stack test EPA Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Condition 4 of existing permit references RACT analysis dated 7/12/76 using State of Washington Sulfite Pulp Mill Rules.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **321.9** lb/hour **1410** tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **300 ppm** Reference: **Rate used in 6/75 model**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See comment.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Basis for SO_2 emission limit is 300 ppm concentration in the stack gas. Pounds per hour values have been taken from the existing permit.**	

Allowable Emissions Allowable Emissions ___**1**___ of __**1**____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **300 ppm dry hourly average**	4. Equivalent Allowable Emissions: **321.9** lb/hour **1410** tons/year
5. Method of Compliance (limit to 60 characters): **Continuous emission monitor**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of __1____

1. Visible Emissions Subtype: **30**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30**% Exceptional Conditions: **40**% Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **Operation of the Brinks demisters constitutes compliance**	
5. Visible Emissions Comment (limit to 200 characters): **OGC case 90-0332, DOAH case 90-2153 determined that the visible emissions were not a surrogate for particulate emissions. Compliance with the visible emission standard is now operating the Brinks mist eliminator. Comment on item 3: Brinks can be offline when no liquor is being fired. FAC 62-296.410(1)(b)(1).**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __2___

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **Siemens** Model Number: **Ultramat SE 7MB1120-1MH20-OBB** Serial Number: **F6-185**	
5. Installation Date: **20-Jul-1994**	6. Performance Specification Test Date: **24-Feb-00**
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor __**2**__ of __**2**__

1. Parameter Code: **VE**	2. Pollutant(s): **PM**
3. CMS Requirement:	[ ] Rule [**X**] Other
4. Monitor Information: **Foxboro Analog Manual Station** Manufacturer: **Foxboro** Model Number:	Serial Number:
5. Installation Date: **15-Jan-1984**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_21 __ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID:__15____ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__22__ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID:__23__ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [X] Attached, Document ID:__24__ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 1 – vent gas wet scrubber stack emissions

4. Emissions Unit Identification Number: **005**
ID: **VS**

[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)
This emission unit includes a wet scrubber that controls emissions from: acid plant, red stock washers, digesters, blow pits and liquor storage tanks.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
Gas adsorption column using alkaline material as a scrubbing media (for example, soda ash, sodium hydroxide, etc.) Followed by a second packed column used as a direct contact condenser for methanol control.

2. Control Device or Method Code(s): **050 followed by 050**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:	**24** hours/day **52** weeks/year	**7** days/week **8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **The operating rate of this emission unit is not ordinarily expressed in terms of a throughput rate or a production rate. Emissions from this emission unit are usually expressed in terms of outlet concentration.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Rayonier Core List of rules applying to the entire facility. See Attachment	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	
FAC 62-297.520	
FAC 62-204.800.(10)(b)(11)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **VS**	2. Emission Point Type Code: **2**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):
Single stack emission point

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
This emission unit is the final control for numerous vents in the pulping group, these include the acid plant, red stock washers, digesters, blow pits and liquor storage tanks.

5. Discharge Type Code: **V**	6. Stack Height: **110** feet	7. Exit Diameter: **3.0** feet
8. Exit Temperature: **122** °F	9. Actual Volumetric Flow Rate: **28,350** acfm	10. Water Vapor: **N/A** %

11. Maximum Dry Standard Flow Rate: **25,400** dscfm	12. Nonstack Emission Point Height: **N/A** feet

13. Emission Point UTM Coordinates:
Zone: **17** East (km): **454.7** North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **SO_2 Recovery system – NH_3 based**		
2. Source Classification Code (SCC): **30700231**	3. SCC Units: **air dried tons unbleached pulp**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **316,219**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Max. day 550 ADMT/day** **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 day/yr) = 316,219 ADUBT/yr.**		

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Methanol emissions from digesters and washers, limited in combination with methanol emissions from evaporators to 2.2 lb. methanol/ODUB ton.**		
2. Source Classification Code (SCC): **30700214**	3. SCC Units: **ADUB Tons**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **316,219**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Based on 40 CFR 63.444**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	050	N/A	EL
VOC	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H001 AcHO	N/A	N/A	NS
H115 methanol	050	N/A	EL
H095 formaldehyde	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **63.2** lb/hour **276.8**tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **250 ppm** Reference: **Specific condition 4 of permit AO45-182645**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(0.000250 dscf SO_2/dscf gas)(25400 dscf/min)(0.0026 moleSO_2/dscf) (64 lb SO_2/mole)(60 min/hr) = 63.2 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __**1**____ of __**2**____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **250 ppm**	4. Equivalent Allowable Emissions: **63.2** lb/hour **276.8** tons/year
5. Method of Compliance (limit to 60 characters): **Instack continuous emission monitor**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Specific Condition 4 of existing permit AO45-182645**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **Methanol**	2. Total Percent Efficiency of Control: **70**
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.2 lb. MeOH/ODUB ton** Reference: **40 CFR 63.444**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **The sum of methanol emissions from this emission unit plus that from the EV and WT emission units must not exceed 2.2 lb/ODUBT.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __2____ of __2____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.2 lb. MeOH/ODUB tons**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Stack test, WATER 9 and mass balance**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1____ of __1____

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **FAC 62-296.320(4)(b)(1)**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __1__

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **Siemens** Model Number: **Ultramat SE:SSN-EN-40** Serial Number:	
5. Installation Date: **23-Mar-95**	6. Performance Specification Test Date: **26-Feb-2000**
7. Continuous Monitor Comment (limit to 200 characters): **Continuous emission monitor required by condition 6 of air operating permit AO45-182645.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__25 __ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:___26___ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [X] Attached, Document ID:__27___ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:______ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Non-condensed vapors from evaporators

4. Emissions Unit Identification Number: ID: **EVO1** — [ ] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Water injection followed by direct contact condenser.**	
2. Control Device or Method Code(s): **028 followed by 047**	

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:	**24** hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules.	
Rayonier Core List of Rules applying to entire facility. See Attachment 2.	
FAC-62-204.800(10)(b)(11)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **RB**	2. Emission Point Type Code: **2**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Two evaporator train non-condensible emissions are treated to remove methanol and other condensible organic HAP and thence are discharged to the Recovery boiler stack.**

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
RB

5. Discharge Type Code: **V**	6. Stack Height: **264** feet	7. Exit Diameter: **7.33** feet
8. Exit Temperature: **126** °F	9. Actual Volumetric Flow Rate: **160,096** acfm	10. Water Vapor: **13.55** %

11. Maximum Dry Standard Flow Rate: **131,400** dscfm	12. Nonstack Emission Point Height: **N/A** feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **454.7** North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC): **30700222**	3. SCC Units: **air dried unbleached tons**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **316,124**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMT/day)(1.1023 ST/MT)(1/0.7 UB/B)(365 days/yr) – 316,124 T UBAD/yr**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
H115 methanol	028	047	EL
HAPs	028	047	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **Methanol H115**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.2 lb. H115/ODUB Ton** Reference:	7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___1___ of ____1__

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Stack test plus WATER 9 and facility-wide mass balance.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **No continuous monitor required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__28____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__29____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID:__30____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID:__31____ [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:______ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 3 – Wastewater collection and treatment

4. Emissions Unit Identification Number: [ ] No ID
ID: **WT** [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

<u>Emissions Unit Control Equipment</u>

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **No control equipment.**
2. Control Device or Method Code(s): **N/A**

<u>Emissions Unit Details</u>

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **Emission from this unit is calculated from liquid methanol concentration and EPA Water 9 model computations. This unit's methanol emissions are summed with those of units (EV) and (VS) to provide an emission of less than 2.2 lb. methanol per oven dry unbleached short ton of pulp.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

FAC 62.204.800(10)(b)(11)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **WT**	2. Emission Point Type Code: **4**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Surface of liquid passing through unit operations.**

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **This emission unit includes the wastewater pump stations, primary clarifier, clarifier discharge flume and secondary treatment lagoon. These systems collect condensates from "covered" methanol control systems (EU6[VS] and EU7[EV]).**

5. Discharge Type Code: **F**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %

11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **454.7** North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Methanol emissions from wastewater collection and treatment limited in combination with methanol emissions from evaporators and pulping to 2.2 lb. methanol/ADUB Ton.**		
2. Source Classification Code (SCC): **30700231**	3. SCC Units: **air dried tons unbleached pulp**	
4. Maximum Hourly Rate: **36.10**	5. Maximum Annual Rate: 316,219	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Based on 40 CFR 63.444** **Max. day 550 ADMT/day** **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219 ADUBT/yr.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
H115 methanol	NA	NA	EL
HAPs	NA	NA	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **Methanol**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited?[**No**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _**8**_ to __**70**_ tons/year	
6. Emission Factor: **2.2 lb. MeOH/ODUB ton (2.0 lb/MeOH/ADUBton)** Reference: **40 CFR 63.444**	7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters): **The sum of methanol emissions from this emission unit plus that from EV and VS emission units must not exceed 2.2 lb./ODUBT.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___**1**___ of __**1**___

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.2 lb. MeOH/ODUB ton**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Stack test, Water 9 and mass balance**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:**N/A**	
5. Visible Emissions Comment (limit to 200 characters): **N/A**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **None (Horsepower)**	2. Pollutant(s): **N/A**
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Continuous monitoring system monitors the number of aerators operating in the secondary treatment system.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__32____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:________ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [X] Attached, Document ID:__19______ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – this is a collection of unregulated emission points involving bleaching – BL.**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**X**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for vent numbers for unregulated emission points under BL emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**	
2. Control Device or Method Code(s): **N/A**	

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Not required – unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of unregulated emission points associated with the bleach plant in which the pulp is contacted with various chemicals to remove impurities from the cellulose.**

2. Source Classification Code (SCC): **30700114**	3. SCC Units: **air dried tons of unbleached pulp**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **316,219**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**

10. Segment Comment (limit to 200 characters):

(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):

2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:

10. Segment Comment (limit to 200 characters):

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	**N/A**	**N/A**	**NS**
CO	**N/A**	**N/A**	**NS**
H120 MEK	**N/A**	**N/A**	**NS**
H115 methanol	**N/A**	**N/A**	**NS**
H043 chloroform	**N/A**	**N/A**	**NS**
H001 AcOH	**N/A**	**N/A**	**NS**
H038 chlorine	**N/A**	**N/A**	**NS**
HAPs	**N/A**	**N/A**	**NS**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically **N/A** Limited? [
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions _____ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No emission monitors are required. this is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – chlorine dioxide plant emission points – CD**

4. Emissions Unit Identification Number:
ID:

[X] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for vent ID number associated with this emissions unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Packed scrubber on ClO_2 absorber column.**
2. Control Device or Method Code(s): **050**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

<u>List of Applicable Regulations</u>

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**	

5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of emission points associated with the plant that manufactures chlorine dioxide for use on site in the purification of cellulose.**		
2. Source Classification Code (SCC): **30700115**	3. SCC Units: **tons produced (chlorine dioxide**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
H038 chlorine	050	N/A	NS
H115 methanol	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically **N/A**
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No emissions monitors are required. This is an unregulated emissions unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – This is a group of unregulated emission units associated with the pulp machine and finishing goals.**

4. Emissions Unit Identification Number: [X] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:][	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**NO**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
   Cylone – There are two cyclones associated with the pneumatic conveying of pulp trim pieces from the rewinder or bale cutter to the repulper or a shredder/baler.

2. Control Device or Method Code(s): **075**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**	

5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %

11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Pulp is formed into sheets and dried and further packaged to customer specifications.**		
2. Source Classification Code (SCC): **????**	3. SCC Units: **tons processed**	
4. Maximum Hourly Rate: **2350 lb/hour**	5. Maximum Annual Rate: **6834 ton/year**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **The segment quantities given here are for the amount of trim that could pass through the cyclones and not the total quantity of pulp that passes through the machine and finishing areas.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	075	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __**1**____ of __**1**___

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters):**This section does not apply. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters):**This section is not applicable. No continuous emission monitors required. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:________

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:________

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:________

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:________

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:________

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:________

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – a collection of emission points associated with wastewater treatment – EN.**

4. Emissions Unit Identification Number: ID: [**X**] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:][	7. Emissions Unit Major Group SIC Code:**26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters): **See Attachment 1 for emission points in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day weeks/year	days/week hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of _1____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of unregulated emission points associated with the collection and treatment of process waste water.**		
2. Source Classification Code (SCC):	3. SCC Units: **thousands of barrels waste water processed**	
4. Maximum Hourly Rate: **26.1**	5. Maximum Annual Rate: **130,357**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(15 mgd)(1 bbl/42 gal)(365 days/yr)(1/100 bbl/ K bbl) = 130,357**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H043 chloroform	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No continuous monitors are required. This is an unregulated source.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:________

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:________

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:________

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:________

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:________

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:________

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – unregulated pulping component emission points – PG.**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for emission points in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day weeks/year	days/week hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __**1**___ of _**1**____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of emission points associated with the cooking of chips and the production of the cooking acid.**		
2. Source Classification Code (SCC):	3. SCC Units: **tons air dried unbleached pulp produced**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **316,219**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters):**This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters):**This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – a group of unregulated emission points related to screening – SC.**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:][	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for emission points in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Material separation – emissions related to quantity of material processed.**		
2. Source Classification Code (SCC): **30700120**	3. SCC Units: **air dried unbleached pulp produced**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **316,219**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H120 MEK	N/A	N/A	N/A

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units **N/A**:	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – collection of unregulated utility emission points – UT.**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:][	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for a list of emission points included in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):**This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**	

5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %

11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Miscellaneous utility functions – emissions related to activity**		
2. Source Classification Code (SCC): **30700199**	3. SCC Units: **air dried tons of unbleached pulp**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **321930**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	N/A	N/A	NS
VOC	N/A	N/A	NS
H001 AcHO	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters):**This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date:**][**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 4 – collection of woodyard handling equipment – WY.**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **][**	7. Emissions Unit Major Group SIC Code:**26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for a list of emission points included in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):**This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated source.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of emission points involving the debarking and chipping of wood and the conveying of chips to the digester for pulping.**		
2. Source Classification Code (SCC): **30700801**	3. SCC Units: **tons of logs processed**	
4. Maximum Hourly Rate: **267.75**	5. Maximum Annual Rate: **2,345,466**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	N/A	N/A	NS
VOC	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units **N/A**:	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 4 – waste water treatment solids monofill**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:][	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

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

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STCK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Waste water treatment plant solids – emission related to acres of storage.**		
2. Source Classification Code (SCC): **30700121**	3. SCC Units: **Acres of storage**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **~20 acres storage (operating & covered)**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
PM	N/A	N/A	NS
H2S	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Jonathan Holtom

2. MS #5500

3. ______

5. ______

PLEASE PREPARE REPLY FOR:	COMMENTS:
____ SECRETARY'S SIGNATURE	Per email —
____ DIV/DIST DIR SIGNATURE	Rayonier, Inc
____ MY SIGNATURE	Title V Renewal
____ YOUR SIGNATURE	Application and
____ DUE DATE ______	CAM Plan
ACTION/DISPOSITION	
X DISCUSS WITH ME	
X COMMENTS/ADVISE	
____ REVIEW AND RETURN	
____ SET UP MEETING	
____ FOR YOUR INFORMATION	RECEIVED
____ HANDLE APPROPRIATELY	NOV 22 2002
____ INITIAL AND FORWARD	
____ SHARE WITH STAFF	BUREAU OF AIR REGULATION
X FOR YOUR FILES	

FROM: Rita Smith DATE: 11/20/02 PHONE: 804-3235

DEP 15-026 (12/93)

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: **Rayonier, Inc.**	
2. Site Name: **Fernandina Dissolving Sulfite Mill**	
3. Facility Identification Number: **31JAX450004** [ ] Unknown	
4. Facility Location: Street Address or Other Locator: **Foot of Gum Street** City: **Fernandina Beach** County: **Nassau** Zip Code: **32035-1309**	
5. Relocatable Facility? [ ] Yes [**X**] No	6. Existing Permitted Facility? [**X**] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **David E. Tudor, Mgr Env Affairs – Air**
2. Application Contact Mailing Address: **P. O. Box 2002** Organization/Firm: **Rayonier, Inc.** Street Address: **Foot of Gum Street** City: **Fernandina Beach** State: **FL** Zip Code: **32035**
3. Application Contact Telephone Numbers: Telephone: (**904**) **277-1452** Fax: (**904**) **277-1411**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	RECEIVED
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	NOV 06 2002

STATE OF FLORIDA
DEPT. OF ENV. PROTECTION
NORTHEAST DISTRICT-JAX

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[X] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:____________________

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:____________________

Operation permit number to be revised:____________________

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:____________________

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:____________________

Reason for revision:____________________

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: **W. M. Burch, General Manager**	
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: **Rayonier, Inc.** Street Address: **P. O. Box 2002** City: **Fernandina Beach** State: **FL** Zip Code: **32035**	
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: **(904)277-1410**	Fax: **(904)277-1411**

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

W. M. Burch — 10/5/02

Signature — Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff** Registration Number: **19011**	
2. Professional Engineer Mailing Address: Organization/Firm: **Golder Associates Inc.** Street Address: **6241 NW 23rd Street, Suite 500** City: **Gainesville** State: **FL** Zip Code: **32653**	
3. Professional Engineer Telephone Numbers: Telephone: **(352) 336 - 5600**	Fax: **(352) 336-6603**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

*If the purpose of this application is to obtain a Title V source air operation permit (check here [**X**], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff — 11/5/02

Signature — Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
B1	No. 1 Power Boiler	N/A	N/A
B2	No. 2 Power Boiler	N/A	N/A
B3	No. 3 Power Boiler	N/A	N/A
MS	Molten Sulfur Handling System	N/A	N/A
RB	Recovery Boiler Stack	N/A	N/A
VS	Vent Gas Scrubber Stack	N/A	N/A
EV	Evaporator NonCondensible Emissions	N/A	N/A
WT	Wastewater Collection and Treatment Emission Points	N/A	N/A
BL	Unregulated Bleach Plant Emission Points	N/A	N/A
CD	Unregulated Chlorine Dioxide Plant Emission Points	N/A	N/A
MF	Unregulated Machine & Finishing Emission Points	N/A	N/A
EN	Unregulated Environmental Emission Points	N/A	N/A
PG	Unregulated Pulping Area Emissions Points	N/A	N/A
SC	Unregulated Screening Area Emission Points	N/A	N/A
UT	Unregulated Utility Area Emission Points	N/A	N/A
WY	Unregulated Woodyard Emission Points	N/A	N/A
LF	Unregulated Waste Water Solids Monofill Emissions	N/A	N/A

Application Processing Fee

Check one: [ ] Attached - Amount: $________________ [X] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations: **Not applicable – No new construction proposed**
2. Projected or Actual Date of Commencement of Construction: **N/A**
3. Projected Date of Completion of Construction: **N/A**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: **17**	East (km): **454.7**	North (km): **3392.2**	
2. Facility Latitude/Longitude: **N/A** Latitude (DD/MM/SS):		Longitude (DD/MM/SS):	
3. Governmental Facility Code: **C**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **26**	6. Facility SIC(s): **2611**
7. Facility Comment (limit to 500 characters): **This facility extracts cellulose from fibrous sources using processes similar to the sulfite pulping process.**			

Facility Contact

1. Name and Title of Facility Contact: **Richard Hopper, Manager, Environmental Operations**		
2. Facility Contact Mailing Address: Organization/Firm: **Rayonier, Inc.** Street Address: **Post Office Box 2002** City: **Fernandina Beach**	State: **Florida**	Zip Code: **32035-1339**
3. Facility Contact Telephone Numbers: Telephone: (**904**) **277-1480**	Fax: (**904**) **277-1411**	

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. [ ] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [X] Major Source of Hazardous Air Pollutants (HAPs)?	
5. [ ] Synthetic Minor Source of HAPs?	
6. [X] One or More Emissions Units Subject to NSPS?	
7. [X] One or More Emission Units Subject to NESHAP?	
8. [ ] Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	

List of Applicable Regulations

See Attachment 2	

B. FACILITY POLLUTANTS

List of Pollutants Emitted See Attachment 3 for list. No Caps are requested.

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap lb/hour	tons/year	4. Basis for Emissions Cap	5. Pollutant Comment

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1.	Area Map Showing Facility Location: [X] Attached, Document ID:__4____ [ ] Not Applicable [ ] Waiver Requested
2.	Facility Plot Plan: [X] Attached, Document ID:__5____ [ ] Not Applicable [ ] Waiver Requested
3.	Process Flow Diagram(s): [X] Attached, Document ID:__6____ [ ] Not Applicable [ ] Waiver Requested
4.	Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID:__7____ [ ] Not Applicable [ ] Waiver Requested
5.	Fugitive Emissions Identification: [X] Attached, Document ID:__8____ [ ] Not Applicable [ ] Waiver Requested
6.	Supplemental Information for Construction Permit Application: [ ] Attached, Document ID:________ [X] Not Applicable
7.	Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: [X] Attached, Document ID:__9____ [ ] Not Applicable
9. List of Equipment/Activities Regulated under Title VI: [X] Attached, Document ID:___10___ [ ] Equipment/Activities On site but Not Required to be Individually Listed [ ] Not Applicable
10. Alternative Methods of Operation: [X] Attached, Document ID:___11___ [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID:________ [X] Not Applicable
12. Identification of Additional Applicable Requirements: [ ] Attached, Document ID:________ [X] Not Applicable
13. Risk Management Plan Verification: [X] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:__12____) or previously submitted to DEP (Date and DEP Office:________________________) [ ] Plan to be submitted to CEPPO (Date required:___________________________) [ ] Not Applicable
14. Compliance Report and Plan: [X] Attached, Document ID:__34____ [ ] Not Applicable
15. Compliance Certification (Hard-copy Required): [X] Attached, Document ID:__13____ [ ] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
This is an oil fired boiler.

4. Emissions Unit Identification Number: **001** [ ] No ID
ID: **B1** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	[**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Wet venturi scrubber**
2. Control Device or Method Code(s): **053**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**185**	mmBTU/hr
2. Maximum Incineration Rate:	lb/hr	**N/A**	tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **N/A**			
5. Requested Maximum Operating Schedule:	**24** hours/day		**7** days/week
	52 weeks/year		**24** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Rayonier Core List of Rules applying to entire facility. See Attachment 2.	
FAC 62-296.410(1)(b)	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)(c)	
FAC 62-297.411	
FAC 62-297.412	
FAC 62-297.413	
FAC 62-297.415	
FAC 62-297.417	
FAC 62-297.420	
FAC 62-297.570	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **B1 – Stack A**	2. Emission Point Type Code: **2**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **No. 1 oil fired power boiler combines exhaust gases with No. 2 oil and wood fired boiler, and rarely No. 3 oil and wood fired boiler.**

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. **B1, B2, B3**

5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **136** °F	9. Actual Volumetric Flow Rate: **136,700** acfm	10. Water Vapor: **17.8** %

11. Maximum Dry Standard Flow Rate: **106,000** dscfm	12. Nonstack Emission Point Height: **N/A** feet

13. Emission Point UTM Coordinates:

Zone: **17** East (km): **454.7** North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1__ of __1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No.6 oil fired in boiler (emissions related to thousands of gallons burned)**		
2. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **thousands gallons burned**	
4. Maximum Hourly Rate: **1.23**	5. Maximum Annual Rate: **10,804**	6. Estimated Annual Activity Factor: **N/A**
6. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **0.03**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **185 mmBTU/hr x 1 gal/0.15 mmBTU/1000 = 1.23 kgal/hr**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	053	N/A	EL
SO2	N/A	N/A	EL
CO	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H113 manganese	N/A	N/A	NS
HAPs	NA	NA	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **16.0** lb/hour **70.1** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **0.086 lb/mmBTU** Reference: **FAC 62-296.410(2) adjusted to maintain existing mass emissions with increased heat ratio**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(16 lb/hr)/185 mmBTU/hr) = 0.086 lb/mmBTU** **(16.0 lb/hr) x (8760 hr/yr) x (1/2000 ton/lb) = 70.1 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _**1**___ of __**1**___

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **0.086 lb PM/mmBTU**	4. Equivalent Allowable Emissions: **16.0** lb/hour **70.1** tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **440** lb/hour **1927** tons/year	4. Synthetically Limited? **[X]**
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
5. Emission Factor: **2.37 lb/mmBTU from fossil fuel** Reference: **Para. 4 in Stipulation of March 10, 1982 adjusted for new heat input rate at same mass emissions**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(185 mmBTU/hr) x (2.37lb/mmBTU) = 440 lb/hr** **(440 lb/hr) x (8760 hr/yr) x (1/2000 ton/lb) = 1927.2 tons/year**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **See permit No. AO45-183504. Annual emission is calculated on 8760 hr/yr as allowed in the permit. Stipulation seems to be based on 8400 hr/yr. If possible rebuild improves efficiency, emission factor may return to original 2.75 lb/mmBTU.**	

Allowable Emissions Allowable Emissions _1___ of __1___

1. Basis for Allowable Emissions Code: **other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.37 lb SO2/mmBTU from fossil fuel**	6. Equivalent Allowable Emissions: **440** lb/hour **1927** tons/year
5. Method of Compliance (limit to 60 characters): **fuel analysis and fuel usage measurements**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **See Stipulation of May 10, 1982 and subsequent Order of April 5, 1982 adjusted to maintain same mass emission rate at new heat input rate, and based on 8760 hr/yr. See comment page 19 regarding annual emissions and boiler rebuild or replacement.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1___ of __1___

1. Visible Emissions Subtype: **VE30**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40** % Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Wet scrubber on stack. Rule basis for allowable Opacity is FAC 62-296.410(1)(b)(1).**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor ____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No continuous emission monitors are required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_14____ [ ] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [X] Attached, Document ID:__15____ [ ] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [X] Attached, Document ID:__16____ [ ] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [X] Attached, Document ID:__17____ [ ] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:______________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[X] Attached, Document ID:__18____ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[X] Attached, Document ID:___19___ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:________

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:________

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:________

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:________

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:________

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:________

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one) [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). [X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one) [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **No. 2 oil and wood fired boiler**			
4. Emissions Unit Identification Number: **002** ID: **B2**			[ ] No ID [ ] ID Unknown
5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**
9. Emissions Unit Comment: (Limit to 500 Characters)			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Multiclones followed by wet venturi scrubber**
2. Control Device or Method Code(s): **076 and 053**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**218**	mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr		tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **N/A**			
5. Requested Maximum Operating Schedule:			
	24 hours/day		**7** days/week
	52 weeks/year		**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This is a combination fuel oil and wood power boiler rated at 120,000 lb steam per hour. The heat input rate on No.6 fuel oil is 184 mmBTU/hr at 65% efficiency and on wood waste is 218 mmBTU/hr at 55% efficiency.**			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Rayonier Core List of Rules applying to entire facility. See Attachment 2.	
FAC 62-296.410(1)(b)	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	
FAC 62-297.411	
FAC 62-297.412	
FAC 62-297.413	
FAC 62-297.415	
FAC 62-297.417	
FAC 62-297.420	
FAC 62-297.570	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **B2 stack A**		2. Emission Point Type Code: **2**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **No. 1 oil fired power boiler, No. 2 oil and wood fired power boiler, and rarely No. 3 oil and wood fired power boiler.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **B1 - No. 1 power boiler** **B2 - No. 2 power boiler** **B3 - No. 3 power boiler**		
5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **136** °F	9. Actual Volumetric Flow Rate: **136,700** acfm	10. Water Vapor: **17.8** %
11. Maximum Dry Standard Flow Rate: **106,000** dscfm		12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1__ of __2__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No. 6 oil fired in boiler (emissions related to thousands of gallons burned)**		
2. Source Classification Code (SCC): **1-02-009-02**	3. SCC Units: **thousand gallons burned**	
4. Maximum Hourly Rate: **1.23**	5. Maximum Annual Rate: **10,774**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **0.03**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **184 mmBTU/hr x 1 gal/0.15 mmBTU/1000 = 1.23 thousand gallons/hr**		

Segment Description and Rate: Segment __2__ of __2__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **hogged fuel fired combination boiler (emissions related to tons of fuel burned)**		
2. Source Classification Code (SCC): **10300902**	3. SCC Units: **tons of fuel burned**	
4. Maximum Hourly Rate: **24.2**	5. Maximum Annual Rate: **212,186**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment (limit to 200 characters): **See Permit No. AO45-183506. Basis of calculation is as-is tons.** **218 mmBTU/hr x 1 ton/9mmBTU = 24.2 tons/hr**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**076**	**053**	**EL**
SO2	**N/A**	**N/A**	**EL**
CO	**N/A**	**N/A**	**NS**
NOx	**N/A**	**N/A**	**NS**
VOC	**N/A**	**N/A**	**NS**
H115 (methanol)	**N/A**	**N/A**	**NS**
H113 (manganese)	**N/A**	**N/A**	**NS**
H043 (chloroform)	**N/A**	**N/A**	**NS**
HAPs	**NA**	**NA**	**NS**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**	
3. Potential Emissions: **50.6** lb/hour **221.6** tons/year		4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year		
6. Emission Factor: **0.23 lb/mmBTU** Reference: **Paragraph 3 of Stipulation dated March 10, 1982 and subsequent Order dated April 5, 1982 Permit No. AO45-183506..**		7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(120,000 lb steam/hr) x (1/0.55 efficiency) = 218 mmBTU/hr** **(218 mmBTU/hr)x(0.23 lb/mmBTU)x(8760 hr/yr)x(1/2000 ton/lb) = 219.6 tons PM/year** **(50.6 lb/hr) x (8760 hr/yr) x (1/2000 ton/lb) = 221.6 tons PM/yr**		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Hog fuel is used in potential emissions determination. Boiler is also limited to 185 mmBTU/hr of No. 6 fuel oil and emissions of 15.2 lb/hr [or 0.086 lb/mmBTU] and 66.5 tons PM/yr. Emissions factor has been adjusted to maintain same mass emission rate with increased heat input rate.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **50.6** lb/hour **221.6** tons/year
5. Method of Compliance (limit to 60 characters): **annual stack test**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **N/A**	
3. Potential Emissions: **418** lb/hour **1831** tons/year		4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year		
6. Emission Factor: **2.26 lb/mmBTU from fossil fuel** Reference: **Paragraph 4 of March 10, 1982 Stipulation and subsequent April 5, 1982 Order adjusted for increased heat input @ same mass emission.**		7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(120,000 lb steam/hr) x (1/0.65 efficiency) = 184 mmBTU/hr** **(185 mmBTU/hr)x(2.26 lb/mmBTU) = 418 lbs. SO_2/hr.** **(418 lbs./hr) x (8760 hr/yr) x (1/2000 ton/lb) = 1830.8 tons SO_2/yr**		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **See permit No. AO45-183504. Annual emission is calculated on 8760 hr/yr as allowed in the permit. Stipulation seems to be based on 8400 hr/yr. If possible rebuild improves efficiency, emission factor may return to original 2.75 lb/mmBTU.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **418** lb/hour **1830.8** tons/year
5. Method of Compliance (limit to 60 characters): **annual stack test**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of ___1___

1. Visible Emissions Subtype: **VE30**	2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40%** Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Wet Scrubber on Stack. Rule Basis is FAC 62-296.410(1)(b)(1)**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **No continuous monitor required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:___14___ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:___15___ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:__ 16___ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:__ 17___ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [X] Attached, Document ID:__18____ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
    [X] Attached, Document ID:__19____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Oil- and wood-fired boiler

4. Emissions Unit Identification Number: **003**
ID: **B3**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	**[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Multi-clone followed by wet venturi scrubber**
2. Control Device or Method Code(s): **076 and 053**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**245**	mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr		tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **N/A**			
5. Requested Maximum Operating Schedule:			
	24 hours/day		**7** days/week
	52 weeks/year		**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			

This is a combination fuel oil and wood waste power boiler rated at 135,000 lb. steam/hr. The heat input rate on No. 6 fuel oil is 207 mmBTU at 65% efficiency and in wood waste is 245 mmBTU/hr at 55% efficiency.

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Rayonier Core List of Rules applying to entire facility. See Attachment 2	
FAC 62-296.410(1)(b)	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	
FAC 62-297.411	
FAC 62-297.412	
FAC 62-297.415	
FAC 62-297.417	
FAC 62-297.420	
FAC 62-297.570	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **B3, Stack B**	2. Emission Point Type Code: **2**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Stack B, at times combined with other boilers and Stack A.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **B1 – No. 1 boiler** **B2 – No. 2 boiler** **B3 – No. 3 boiler**	

5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **141** °F	9. Actual Volumetric Flow Rate: **120,600**acfm	10. Water Vapor: **20** %

11. Maximum Dry Standard Flow Rate: **95,000**dscfm	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**	
14. Emission Point Comment (limit to 200 characters):	

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **No. 6 oil fired in boiler (emissions related to thousands of gallons burned)**		
2. Source Classification Code (SCC): **1-02-004-01**	3. SCC Units: **Thousand gallons burned**	
4. Maximum Hourly Rate: **1.38**	5. Maximum Annual Rate: **12,088.8**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5**	8. Maximum % Ash: **0.03**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters): **(207 mmBTU/hr) / (0.15 mmBTU/gal)(1/1000) = 1.38 kgal/hr.**		

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Hogged fuel burned in boiler = emission related to tons burned**		
2. Source Classification Code (SCC): **1-02-009-02**	3. SCC Units: **Tons Burned**	
4. Maximum Hourly Rate: **27.2**	5. Maximum Annual Rate: **238,467**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **9.0**
10. Segment Comment (limit to 200 characters): **(245 mmBTU/hr) / (9 mmBTU/ton)(8760 hr/yr) = 238,467 tons hog fuel/yr.**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	076	053	EL
SO2	N/A	N/A	EL
CO	N/A	N/A	NS
NOx	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 (methanol)	N/A	N/A	NS
H113 (manganese)	N/A	N/A	NS
H043 (chloroform)	N/A	N/A	NS
HAPs	NA	NA	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **50.6** lb/hour **221.6**tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **0.207** Reference: **Paragraph 3 of stipulation of March 10, 1982 and subsequent April 5, 1982 Order adjusted.**	7. Emissions Method Code: **O**

8. Calculation of Emissions (limit to 600 characters):

(135,000 lb.steam/hr)(1/0.55 eff) = 245 MMBTU/hr

(0.207 lb/mmmBTU)(245 mmBTU/hr) = 50.6 lb/hr

(50.6 lb/hr)(8760 hr/yr)(1/2000 ton/lb) = 221.6 tons/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

The emissions factor is adjusted to maintain the same mass emission rate with an increase in heat input rate.

Allowable Emissions Allowable Emissions __1____ of __2____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **50.6** lb/hour **221.6** tons/year

5. Method of Compliance (limit to 60 characters):

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **459** lb/hour **2010** tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.21 lb/mmBTU from oil fuel** Reference: **Paragraph 4 of stipulation of March 10, 1982 and subsequent April 5, 1982 Order adjusted.**	7. Emissions Method Code: **O**

8. Calculation of Emissions (limit to 600 characters):

(135,000 lb.steam/hr)(1/0.65 eff.) = 208 MMBTU/hr

(208 lb/mmmBTU)(2.21 mmBTU/hr) = 459 lb/hr

(459 lb/hr)(8760 hr/yr)(1/2000 ton/lb) = 2010.4 tons/yr

9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions __**1**____ of __**1**____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.21 lb/mmBTU**	4. Equivalent Allowable Emissions: **459** lb/hour **2010** tons/year

5. Method of Compliance (limit to 60 characters):

Fuel analysis and fuel usage measurements

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **VE30**	2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30** % Exceptional Conditions: **40** % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **EPA Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Rule Basis in FAX 62-296.410(1)(b)(1)**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:__14____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:__15___ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:__16___ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:__17____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [X] Attached, Document ID:__18____ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:___19___ [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 4 – molten sulfur handling area fugitive emissions – MS

4. Emissions Unit Identification Number: **007**
ID: **MS**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

This emission unit is regulated by Work Practice Standards only.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Work Practice Standards only.**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This is not an emission limited emission unit. All the emissions are fugitive and controlled by work practices as specified in 62.296.411(1) FAC. Volume of molten sulfur storage tank is 55,000 gallons.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Rayonier Core List of rules applying to entire facility. See Attachment 2.	
FAC 62-212-600	
FAC 62-296-411(1)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **MS**		2. Emission Point Type Code: **4**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Molten sulfur storage tank vent and rail car loading containment area.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **AP003**		
5. Discharge Type Code: **F**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **77**°F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm		12. Nonstack Emission Point Height: **0** feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Rail tank car unloading and storage of molten sulfur – unconfined fugitive emissions related to spills.**		
2. Source Classification Code (SCC): **none found**	3. SCC Units: **tons stored**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **400**
7. Maximum % Sulfur: **100%**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **The regulatory requirements for this source are designed to minimize unconfined particulate emissions by diking, cleanup, paving and recordkeeping. The regulation does not require emissions estimation nor monitoring.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	N/A	N/A	WP

Emissions Unit Information Section __4____ of __17____MS

Pollutant Detail Information Page ______ of ______

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **This section is not applicable. This is not an emissions limited emissions unit.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __**1**____ of __**1**____

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1____ of __1____

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **Basis is FAC 296.411(g)** **FAC 62-210.700(1) allows periods of excess emissions for startup, shutdown and malfunctions for period not to exceed 2 hours in any 24-hour period.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __1___

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No continuous emission monitor is required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__20____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[**X**] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 1 Recovery Boiler – RB

4. Emissions Unit Identification Number: **006** [ ] No ID
ID: **RB** [ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	**[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Tray type liquid scrubber which controls combustion gases from the boiler and noncondensible gases from the evaporators followed by a Brinks fiber type mist eliminator.**   **Brinks type mist eliminator for particulates – high velocity.**
2. Control Device or Method Code(s): **051 and 014**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		**653.1** mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **70,000 lb/hr of red liquor solids.**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:	**24** hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Ray. Core list of rules applying to entire facility. See Attachment 2.	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(5)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	
FAC 62-297.411	
FAC 62-297.412	
FAC 62-297.415	
FAC 62-297.417	
FAC 62-297.420	
FAC 62-297.570	
FAC 62-297.520(1)(b)	
FAC 62-204.800(10)(b)(28)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **RB**	2. Emission Point Type Code: **1**

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **RB041 – Recovery Boiler Stack**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**

5. Discharge Type Code: **V**	6. Stack Height: **264** feet	7. Exit Diameter: **7.33** feet
8. Exit Temperature: **126** °F	9. Actual Volumetric Flow Rate: **160,096** acfm	10. Water Vapor: **13.55**%

11. Maximum Dry Standard Flow Rate: **131,400** dscfm	12. Nonstack Emission Point Height: **N/A** feet

13. Emission Point UTM Coordinates:		
Zone: **17**	East (km): **454.7**	North (km): **3392.2**

14. Emission Point Comment (limit to 200 characters):

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Recovery system NH_3 – combustion of red liquor solids – emissions related to quantity of red liquor solids burned in boiler**		
2. Source Classification Code (SCC): **30700222**	3. SCC Units: **air dried tons unbleached pulp**	
4. Maximum Hourly Rate: **35.5**	5. Maximum Annual Rate: **310,980**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **20**
10. Segment Comment (limit to 200 characters): **(70,000 lb.SSLS/hr.)(8760 hr./yr.)(34.7 ADUBT/cook)/68,400 lb.SSLS/cook =** **310,980 ADUBT/yr.**		

Segment Description and Rate: Segment __2___ of _2____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Recovery system NH_3 – combustion of Nr. 6 fuel oil in recovery boiler, emission related to quantity of oil burned.**		
2. Source Classification Code (SCC): **30790022**	3. SCC Units: **1000 gallons burned**	
4. Maximum Hourly Rate: **1.789 gpm**	5. Maximum Annual Rate: **15671.6**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **2.5%**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **150**
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	051	014	EL
SO_2	051	014	EL
PM10	051	014	NS
CO	N/A	N/A	NS
NO_X	N/A	N/A	NS
VOC	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H001 AcHO	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H186 m,p-xylene	N/A	N/A	NS
H187 o-xylene	N/A	N/A	NS
H163 syrene	N/A	N/A	NS
H124 trichlorobenzene	N/A	N/A	NS
H113 manganese	N/A	N/A	NS
H133 nickel	N/A	N/A	NS
H148 phosphorus	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **67.5** lb/hour **295.6**tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.5 lb PM/ADT UB Pulp** Reference:**Permit A045-171127 Specific Condition 4**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.5 lb/adtub pulp**	4. Equivalent Allowable Emissions: **67.5** lb/hour **295.6** tons/year
5. Method of Compliance (limit to 60 characters): **Stack test EPA Method 5**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Condition 4 of existing permit references RACT analysis dated 7/12/76 using State of Washington Sulfite Pulp Mill Rules.**	

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **N/A**	
3. Potential Emissions: **321.9** lb/hour **1410** tons/year		4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year		
6. Emission Factor: **300 ppm** Reference: **Rate used in 6/75 model**		7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **See comment.**		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Basis for SO_2 emission limit is 300 ppm concentration in the stack gas. Pounds per hour values have been taken from the existing permit.**		

Allowable Emissions Allowable Emissions ___1___ of __1____

1. Basis for Allowable Emissions Code: **Other**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **300 ppm dry hourly average**	4. Equivalent Allowable Emissions: **321.9** lb/hour **1410** tons/year
5. Method of Compliance (limit to 60 characters): **Continuous emission monitor**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of __1____

1. Visible Emissions Subtype: **30**	2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **30%** Exceptional Conditions: **40%** Maximum Period of Excess Opacity Allowed: **2** min/hour	
4. Method of Compliance: **Operation of the Brinks demisters constitutes compliance**	
5. Visible Emissions Comment (limit to 200 characters): **OGC case 90-0332, DOAH case 90-2153 determined that the visible emissions were not a surrogate for particulate emissions. Compliance with the visible emission standard is now operating the Brinks mist eliminator.** **Comment on item 3: Brinks can be offline when no liquor is being fired. FAC 62-296.410(1)(b)(1).**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __2___

1. Parameter Code: **EM**	2. Pollutant(s): SO_2
3. CMS Requirement:	[ ] Rule [**X**] Other
4. Monitor Information: Manufacturer: **Siemens** Model Number: **Ultramat SE 7MB1120-1MH20-OBB** Serial Number: **F6-185**	
5. Installation Date: **20-Jul-1994**	6. Performance Specification Test Date: **24-Feb-00**
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor __2___ of __2___

1. Parameter Code: **VE**	2. Pollutant(s): **PM**
3. CMS Requirement:	[ ] Rule [**X**] Other
4. Monitor Information: **Foxboro Analog Manual Station** Manufacturer: **Foxboro** Model Number: Serial Number:	
5. Installation Date: **15-Jan-1984**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_21 __ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID:__15____[ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__22__ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID:__23__ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [X] Attached, Document ID:__24__ [ ] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 1 – vent gas wet scrubber stack emissions

4. Emissions Unit Identification Number: **005**
ID: **VS**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	**N/A**	**26**	[**X**]

9. Emissions Unit Comment: (Limit to 500 Characters)
This emission unit includes a wet scrubber that controls emissions from: acid plant, red stock washers, digesters, blow pits and liquor storage tanks.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Gas adsorption column using alkaline material as a scrubbing media (for example, soda ash, sodium hydroxide, etc.) Followed by a second packed column used as a direct contact condenser for methanol control.**
2. Control Device or Method Code(s): **050 followed by 050**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **The operating rate of this emission unit is not ordinarily expressed in terms of a throughput rate or a production rate. Emissions from this emission unit are usually expressed in terms of outlet concentration.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules	
Rayonier Core List of rules applying to the entire facility. See Attachment	
FAC 62-297.310	
FAC 62-297.401(1)	
FAC 62-297.401(2)	
FAC 62-297.401(3)	
FAC 62-297.401(4)	
FAC 62-297.401(6)	
FAC 62-297.401(9)	
FAC 62-297.411	
FAC 62-297.412	
FAC 62-297.417	
FAC 62-297.420	
FAC 62-297.520	
FAC 62-204.800.(10)(b)(11)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **VS**	2. Emission Point Type Code: **2**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Single stack emission point**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **This emission unit is the final control for numerous vents in the pulping group, these include the acid plant, red stock washers, digesters, blow pits and liquor storage tanks.**		
5. Discharge Type Code: **V**	6. Stack Height: **110** feet	7. Exit Diameter: **3.0** feet
8. Exit Temperature: **122** °F	9. Actual Volumetric Flow Rate: **28,350** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **25,400** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: Zone: **17** East (km): **454.7** North (km): **3392.2**		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **SO_2 Recovery system – NH_3 based**		
2. Source Classification Code (SCC): **30700231**	3. SCC Units: **air dried tons unbleached pulp**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **316,219**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Max. day 550 ADMT/day** **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 day/yr) = 316,219 ADUBT/yr.**		

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Methanol emissions from digesters and washers, limited in combination with methanol emissions from evaporators to 2.2 lb. methanol/ODUB ton.**		
2. Source Classification Code (SCC): **30700214**	3. SCC Units: **ADUB Tons**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **316,219**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Based on 40 CFR 63.444**		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	050	N/A	EL
VOC	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H001 AcHO	N/A	N/A	NS
H115 methanol	050	N/A	EL
H095 formaldehyde	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: **99%**
3. Potential Emissions: **63.2** lb/hour **276.8**tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **250 ppm** Reference: **Specific condition 4 of permit AO45-182645**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **(0.000250 dscf SO_2/dscf gas)(25400 dscf/min)(0.0026 moleSO_2/dscf) (64 lb SO_2/mole)(60 min/hr) = 63.2 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __**1**____ of __**2**____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **250 ppm**	4. Equivalent Allowable Emissions: **63.2** lb/hour **276.8** tons/year
5. Method of Compliance (limit to 60 characters): **Instack continuous emission monitor**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Specific Condition 4 of existing permit AO45-182645**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **Methanol**	2. Total Percent Efficiency of Control: **70**
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [**No**]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.2 lb. MeOH/ODUB ton** Reference: **40 CFR 63.444**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **The sum of methanol emissions from this emission unit plus that from the EV and WT emission units must not exceed 2.2 lb/ODUBT.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions __**2**____ of __**2**____

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.2 lb. MeOH/ODUB tons**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Stack test, WATER 9 and mass balance**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __1____ of __1____

1. Visible Emissions Subtype: **VE20**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20%** Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **DEP Method 9**	
5. Visible Emissions Comment (limit to 200 characters): **FAC 62-296.320(4)(b)(1)**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __1___ of __1__

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement:	[ ] Rule [X] Other
4. Monitor Information: Manufacturer: **Siemens** Model Number: **Ultramat SE:SSN-EN-40** Serial Number:	
5. Installation Date: **23-Mar-95**	6. Performance Specification Test Date: **26-Feb-2000**
7. Continuous Monitor Comment (limit to 200 characters): **Continuous emission monitor required by condition 6 of air operating permit AO45-182645.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram
   [X] Attached, Document ID:__25 __ [ ] Not Applicable [ ] Waiver Requested

2. Fuel Analysis or Specification
   [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested

3. Detailed Description of Control Equipment
   [X] Attached, Document ID:___26___ [ ] Not Applicable [ ] Waiver Requested

4. Description of Stack Sampling Facilities
   [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested

5. Compliance Test Report
   [ ] Attached, Document ID:________
   [ ] Previously submitted, Date:_______________
   [X] Not Applicable

6. Procedures for Startup and Shutdown
   [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested

7. Operation and Maintenance Plan
   [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested

8. Supplemental Information for Construction Permit Application
   [ ] Attached, Document ID:________ [X] Not Applicable

9. Other Information Required by Rule or Statute
   [ ] Attached, Document ID:________ [X] Not Applicable

10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [X] Attached, Document ID:__27___ [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [X] Attached, Document ID:___19___ [] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Non-condensed vapors from evaporators

4. Emissions Unit Identification Number: ID: **EVO1** [ ] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code:**26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Water injection followed by direct contact condenser.**	
2. Control Device or Method Code(s): **028 followed by 047**	

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

Federally Enforceable Rules.	
Rayonier Core List of Rules applying to entire facility. See Attachment 2.	
FAC-62-204.800(10)(b)(11)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **RB**		2. Emission Point Type Code: **2**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Two evaporator train non-condensible emissions are treated to remove methanol and other condensible organic HAP and thence are discharged to the Recovery boiler stack.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **RB**		
5. Discharge Type Code: **V**	6. Stack Height: **264** feet	7. Exit Diameter: **7.33** feet
8. Exit Temperature: **126** °F	9. Actual Volumetric Flow Rate: **160,096** acfm	10. Water Vapor: **13.55** %
11. Maximum Dry Standard Flow Rate: **131,400** dscfm		12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates: Zone: **17**	East (km): **454.7**	North (km): **3392.2**
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC): **30700222**	3. SCC Units: **air dried unbleached tons**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **316,124**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMT/day)(1.1023 ST/MT)(1/0.7 B/UB)(365 days/yr) – 316,124 T UNAD/yr**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
H115 methanol	028	047	EL
HAPs	028	047	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **Methanol H115**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **2.2 lb. H115/ODUB Ton** Reference:	7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___1___ of ____1__

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Stack test plus WATER 9 and facility-wide mass balance.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **No continuous monitor required.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__28____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:__29____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID:__30____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID:__31____ [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[X] Attached, Document ID:__19____ [ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:________

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:________

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:________

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:________

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:________

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:________

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[**X**] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):
Type 3 – Wastewater collection and treatment

4. Emissions Unit Identification Number: [ ] No ID
ID: **WT** [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **No control equipment.**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule:		
	24 hours/day	**7** days/week
	52 weeks/year	**8760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **Emission from this unit are calculated from liquid methanol concentration and EPA Water 9 model computations. This unit's methanol emissions are summed with those of units (EV) and (VS) to provide an emission of less than 2.2 lb. methanol per oven dry unbleached short ton of pulp.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

FAC 62.204.800(10)(b)(11)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **WT**	2. Emission Point Type Code: **4**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **Surface of liquid passing through unit operations.**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **This emission unit includes the wastewater pump stations, primary clarifier, clarifier discharge flume and secondary treatment lagoon. These systems collect condensates from "covered" methanol control systems (EU6[VS] and EU7[EV]).**		
5. Discharge Type Code: **F**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: Zone: **17**	East (km): **454.7**	North (km): **3392.2**
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Methanol emissions from wastewater collection and treatment limited in combination with methanol emissions from evaporators and pulping to 2.2 lb. methanol/ADUB Ton.**		
2. Source Classification Code (SCC): **30700231**	3. SCC Units: **air dried tons unbleached pulp**	
4. Maximum Hourly Rate: **36.10**	5. Maximum Annual Rate: 316,219	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **Based on 40 CFR 63.444** **Max. day 550 ADMT/day** **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219 ADUBT/yr.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
H115 methanol	**NA**	**NA**	**EL**
HAPs	**NA**	**NA**	**NS**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **Methanol**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited?[**No**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _**8**_ to __**70**_ tons/year	
6. Emission Factor: **2.2 lb. MeOH/ODUB ton (2.0 lb/MeOH/ADUBton)** Reference: **40 CFR 63.444**	7. Emissions Method Code: **O**
8. Calculation of Emissions (limit to 600 characters): **The sum of methanol emissions from this emission unit plus that from EV and VS emission units must not exceed 2.2 lb./ODUBT.**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___**1**___ of __**1**___

1. Basis for Allowable Emissions Code: **Rule**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **2.2 lb. MeOH/ODUB ton**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Stack test, Water 9 and mass balance**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:**N/A**	
5. Visible Emissions Comment (limit to 200 characters): **N/A**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **None (Horsepower)**	2. Pollutant(s): **N/A**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters): **Continuous monitoring system monitors the number of aerators operating in the secondary treatment system.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:__32____ [ ] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [X] Attached, Document ID:________ [ ] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable	
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable	
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable	
14. Compliance Assurance Monitoring Plan [X] Attached, Document ID:__19______ [ ] Not Applicable	
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable	

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – this is a collection of unregulated emission points involving bleaching – BL.**

4. Emissions Unit Identification Number: [X] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[X]**

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for vent numbers for unregulated emission points under BL emission unit.**

Emissions Unit Control Equipment

1.	Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2.	Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

<u>List of Applicable Regulations</u>

Not required – unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of unregulated emission points associated with the bleach plant in which the pulp is contacted with various chemicals to remove impurities from the cellulose.**		
2. Source Classification Code (SCC): **30700114**	3. SCC Units: **air dried tons of unbleached pulp**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **316,219**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMT/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
CO	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H043 chloroform	N/A	N/A	NS
H001 AcOH	N/A	N/A	NS
H038 chlorine	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically **N/A** Limited? [
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions _____ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No emission monitors are required. this is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – chlorine dioxide plant emission points – CD**

4. Emissions Unit Identification Number: [**X**] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for vent ID number associated with this emissions unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Packed scrubber on ClO_2 absorber column.**
2. Control Device or Method Code(s): **050**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day weeks/year	days/week hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __**1**___ of __**1**___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of emission points associated with the plant that manufactures chlorine dioxide for use on site in the purification of cellulose.**		
2. Source Classification Code (SCC): **30700115**	3. SCC Units: **tons produced (chlorine dioxide**	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
H038 chlorine	050	N/A	NS
H115 methanol	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically **N/A** Limited? [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. No emissions monitors are required. This is an unregulated emissions unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [ ] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
    [ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
    [ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
    [ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
    [ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

    [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
    Attached, Document ID:________

    [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
    Attached, Document ID:________

    [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
    Attached, Document ID:________

    [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
    Attached, Document ID:________

    [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
    Attached, Document ID:________

    [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
    Attached, Document ID:________

    [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – This is a group of unregulated emission units associated with the pulp machine and finishing goals.**

4. Emissions Unit Identification Number: ID:
[**X**] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:**][**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? [**NO**]

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **Cylone – There are two cyclones associated with the pneumatic conveying of pulp trim pieces from the rewinder or bale cutter to the repulper or a shredder/baler.**
2. Control Device or Method Code(s):**075**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**			mmBTU/hr
2. Maximum Incineration Rate: **N/A**		lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **N/A**			
5. Requested Maximum Operating Schedule: **N/A**			
	hours/day		days/week
	weeks/year		hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters):		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Pulp is formed into sheets and dried and further packaged to customer specifications.**		
2. Source Classification Code (SCC): **????**	3. SCC Units: **tons processed**	
4. Maximum Hourly Rate: **2350 lb/hour**	5. Maximum Annual Rate: **6834 ton/year**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **The segment quantities given here are for the amount of trim that could pass through the cyclones and not the total quantity of pulp that passes through the machine and finishing areas.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	075	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation __**1**____ of __**1**___

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters):**This section does not apply. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters):**This section is not applicable. No continuous emission monitors required. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – a collection of emission points associated with wastewater treatment – EN.**

4. Emissions Unit Identification Number: ID: [**X**] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date:**][**	7. Emissions Unit Major Group SIC Code:**26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters): **See Attachment 1 for emission points in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of _1____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of unregulated emission points associated with the collection and treatment of process waste water.**		
2. Source Classification Code (SCC):	3. SCC Units: **thousands of barrels waste water processed**	
4. Maximum Hourly Rate: **26.1**	5. Maximum Annual Rate: **130,357**	6. Estimated Annual Activity Factor:**N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(15 mgd)(1 bbl/42 gal)(365 days/yr)(1/100 bbl/ K bbl) = 130,357**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	**N/A**	**N/A**	**NS**
H115 methanol	**N/A**	**N/A**	**NS**
H043 chloroform	**N/A**	**N/A**	**NS**
HAPs	**N/A**	**N/A**	**NS**

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters):**This section is not applicable. This is an unregulated source.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters):**This section is not applicable. No continuous monitors are required. This is an unregulated source.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[ ] Attached, Document ID:________ [X] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:________ [X] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:________ [X] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:________ [X] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:________

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:________

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:________

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:________

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:________

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:________

[X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – unregulated pulping component emission points – PG.**

4. Emissions Unit Identification Number: ID: [**X**] No ID [ ] ID Unknown

5. Emissions Unit Status Code:**A**	6. Initial Startup Date: **N/A**	7. Emissions Unit Major Group SIC Code:**26**	8. Acid Rain Unit? [**No**]

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for emission points in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of _1____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of emission points associated with the cooking of chips and the production of the cooking acid.**		
2. Source Classification Code (SCC):	3. SCC Units: **tons air dried unbleached pulp produced**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **316,219**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMt/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	N/A	N/A	NS
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated source.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one) [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). [X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one) [ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. [X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – a group of unregulated emission points related to screening – SC.**			
4. Emissions Unit Identification Number: ID:			[X] No ID [ ] ID Unknown
5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **][**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**
9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for emission points in this emission unit.**			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day weeks/year	days/week hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __1___ of __1___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Material separation – emissions related to quantity of material processed.**		
2. Source Classification Code (SCC): **30700120**	3. SCC Units: **air dried unbleached pulp produced**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **316,219**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **(550 ADMt/day)(1.1023 ST/MT)(1.429 UB/B)(365 days/yr) = 316,219**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
H120 MEK	N/A	N/A	N/A

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units **N/A**:	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 1 – collection of unregulated utility emission points – UT.**

4. Emissions Unit Identification Number: ID: [X] No ID [ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **][**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for a list of emission points included in this emission unit.**

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**			mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr		tons/day
3. Maximum Process or Throughput Rate: **N/A**			
4. Maximum Production Rate: **N/A**			
5. Requested Maximum Operating Schedule: **N/A**			
	hours/day		days/week
	weeks/year		hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**			

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**		2. Emission Point Type Code: **N/A**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm		12. Nonstack Emission Point Height: **N/A** feet
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __**1**___ of __**1**___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Miscellaneous utility functions – emissions related to activity**		
2. Source Classification Code (SCC): **30700199**	3. SCC Units: **air dried tons of unbleached pulp**	
4. Maximum Hourly Rate: **36.75**	5. Maximum Annual Rate: **321930**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	N/A	N/A	NS
VOC	N/A	N/A	NS
H001 AcHO	N/A	N/A	NS
H120 MEK	N/A	N/A	NS
H115 methanol	N/A	N/A	NS
HAPs	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **N/A**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date:**][**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:________________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one) [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent). [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions. [**X**] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one) [ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. [**X**] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 4 – collection of woodyard handling equipment – WY.**			
4. Emissions Unit Identification Number: ID:			[**X**] No ID [ ] ID Unknown
5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **][**	7. Emissions Unit Major Group SIC Code:**26**	8. Acid Rain Unit? [**No**]
9. Emissions Unit Comment: (Limit to 500 Characters) **See Attachment 1 for a list of emission points included in this emission unit.**			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method): **N/A**
2. Control Device or Method Code(s): **N/A**

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**	hours/day weeks/year	days/week hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated source.	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment __**1**___ of __**1**___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **This is a group of emission points involving the debarking and chipping of wood and the conveying of chips to the digester for pulping.**		
2. Source Classification Code (SCC): **30700801**	3. SCC Units: **tons of logs processed**	
4. Maximum Hourly Rate: **267.75**	5. Maximum Annual Rate: **2,345,466**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	N/A	N/A	NS
VOC	N/A	N/A	NS

Emissions Unit Information Section __16__ of __17____WY

Pollutant Detail Information Page ______ of ______

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically Limited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units **N/A**:	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number:	Serial Number:
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:_______________ [X] Not Applicable	
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested	
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable	
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable	
10. Supplemental Requirements Comment:	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Type 4 – waste water treatment solids monofill**

4. Emissions Unit Identification Number:
ID:

[X] No ID
[ ] ID Unknown

5. Emissions Unit Status Code: **A**	6. Initial Startup Date: **][**	7. Emissions Unit Major Group SIC Code: **26**	8. Acid Rain Unit? **[No]**

9. Emissions Unit Comment: (Limit to 500 Characters)

Emissions Unit Control Equipment

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

Emissions Unit Details

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

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate: **N/A**		mmBTU/hr
2. Maximum Incineration Rate: **N/A**	lb/hr	tons/day
3. Maximum Process or Throughput Rate: **N/A**		
4. Maximum Production Rate: **N/A**		
5. Requested Maximum Operating Schedule: **N/A**		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

List of Applicable Regulations

This section is not applicable. This is an unregulated emission unit.	

D. EMISSION POINT (STCK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? **N/A**	2. Emission Point Type Code: **N/A**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **N/A**		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **N/A**		
5. Discharge Type Code: **N/A**	6. Stack Height: **N/A** feet	7. Exit Diameter: **N/A** feet
8. Exit Temperature: **N/A** °F	9. Actual Volumetric Flow Rate: **N/A** acfm	10. Water Vapor: **N/A** %
11. Maximum Dry Standard Flow Rate: **N/A** dscfm	12. Nonstack Emission Point Height: **N/A** feet	
13. Emission Point UTM Coordinates: **N/A** Zone: East (km): North (km):		
14. Emission Point Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Waste water treatment plant solids – emission related to acres of storage.**		
2. Source Classification Code (SCC): **30700121**	3. SCC Units: **Acres of storage**	
4. Maximum Hourly Rate: **N/A**	5. Maximum Annual Rate: **N/A**	6. Estimated Annual Activity Factor: **N/A**
7. Maximum % Sulfur: **N/A**	8. Maximum % Ash: **N/A**	9. Million Btu per SCC Unit: **N/A**
10. Segment Comment (limit to 200 characters): **~20 acres storage (operating & covered)**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC	N/A	N/A	NS
PM	N/A	N/A	NS
H2S	N/A	N/A	NS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **N/A**	2. Total Percent Efficiency of Control: **N/A**
3. Potential Emissions: **N/A** lb/hour tons/year	4. Synthetically imited? **N/A** [ ]
5. Range of Estimated Fugitive Emissions: **N/A** [ ] 1 [ ] 2 [ ] 3 ______ to ______ tons/year	
6. Emission Factor: **N/A** Reference:	7. Emissions Method Code: **N/A**
8. Calculation of Emissions (limit to 600 characters): **N/A**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

Allowable Emissions Allowable Emissions ______ of ______

1. Basis for Allowable Emissions Code: **N/A**	2. Future Effective Date of Allowable Emissions: **N/A**
3. Requested Allowable Emissions and Units: **N/A**	4. Equivalent Allowable Emissions: **N/A** lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **N/A**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ______ of ______

1. Visible Emissions Subtype: **N/A**	2. Basis for Allowable Opacity: **N/A** [ ] Rule [ ] Other
3. Requested Allowable Opacity: **N/A** Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **N/A**	
5. Visible Emissions Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: **N/A**	2. Pollutant(s): **N/A**
3. CMS Requirement: **N/A**	[ ] Rule [ ] Other
4. Monitor Information: **N/A** Manufacturer: Model Number: Serial Number:	
5. Installation Date: **N/A**	6. Performance Specification Test Date: **N/A**
7. Continuous Monitor Comment (limit to 200 characters): **This section is not applicable. This is an unregulated emission unit.**	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

1. Process Flow Diagram [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:________ [ ] Previously submitted, Date:______________ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:________ [X] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:________ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:________ [X] Not Applicable
10. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation [ ] Attached, Document ID:________ [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID:________ [X] Not Applicable
13. Identification of Additional Applicable Requirements [ ] Attached, Document ID:________ [X] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID:________ [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:________ [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:________ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:________ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:________ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:________ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:________ [X] Not Applicable

LIST OF ATTACHMENTS INCLUDED IN THIS APPLICATION

Attachment	Title
1	List of Sources included in this application
2	Applicable Requirements
3	List of Pollutants Emitted from the Facility
4	Area Map
5	Facility Plot Plan
6	Facility Process Flow Diagram
7	Precautions to Prevent Emissions of Unconfined Particulate Matter
8	Fugitive Emission Identification
9	List of Proposed Insignificant Activities
10	List of Equipment/Activities Regulated Under Title IV
11	Alternative Methods of Operation
12	Risk Management Plan Verification
13	Compliance Certification
14	B1, B2 & B3 – Process Flow Diagram
15	Fuel Specification
16	B1, B2 & B3 Description of Control Equipment
17	B1, B2 & B3 Description of Stack Sampling Facilities
18	B1, B2 & B3 Additional Applicable Requirements
19	CAM Plan
20	MS – Process Flow Diagram
21	RB – Process Flow Diagram
22	RB – Description of Control Equipment
23	RB – Description of Stack Sampling Facilities
24	RB – Identification of Additional Applicable Requirements
25	VS – Process Flow Diagram
26	VS – Description of Control Equipment
27	VS – Identification of Additional Applicable Requirements
28	EV – Process Flow Diagram
29	EV – Description of Control Equipment
30	EV – Description of Stack Sampling Facilities
31	EV – Procedures for Startup and Shutdown
32	WT – Process Flow Diagram
33	Compliance Plan

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
R	B1	PA001	nr 1 boiler
R	B2	PB001	nr 2 boiler
R	B3	PC001	nr 3 boiler
R	MS	AP003	molten sulfur handling area
R	RB	RB041	recovery furnace stack
R	VS	AP018	acid storage tank #4
R	VS	AP011	cooled SSL tank
R	VS	AP015	acid storage tank #1
R	VS	AP010	vent gas scrubber
R	VS	AP017	acid storage tank #3
R	VS	AP019	acid storage tank #5
R	VS	AP016	acid storage tank #2
U	BL	BPA002D	6F washer hood exhaust fan
U	BL	BP011	#5 HCE stock tank vent (new)
U	BL	BPA002F	1F washer hood exhaust fan
U	BL	BPR017	#5 washer exh fan to roof
U	BL	BPR009	roof exh fan over #4 post hypo washer(east)
U	BL	BPA001D	5A washer seal tank vent
U	BL	BP008	exh fan-S side 2R floor-East
U	BL	BPA002E	2F washer hood exhaust fan
U	BL	BPR012	roof exh fan on penthse-middle (HCE/hypo)
U	BL	BPR014	HCE blowtank vent
U	BL	BPA002C	5F washer hood exhaust fan
U	BL	BPR016	#5 post ClO2 washer W wall vent
U	BL	BPA002B	4F washer hood exhaust fan
U	BL	BPR013	roof exh fan on penthse-North (HCE/hypo)
U	BL	BPR011	roof exh fan on penthse-South (HCE/hypo)
U	BL	BPR010	roof exh fan over #4 post hypo
U	BL	BPA001E	1F washer seal tank vent
U	BL	BPA001F	2F washer seal tank vent
U	BL	BP013	#4 washer filtrate tank vent
U	BL	BP012	#4 washer feed tank vent
U	BL	BPR022	roof exh fan - North wall 1/1A penthouse
U	BL	BPA001A	3F washer seal tank vent
U	BL	BPR027	roof exh fan - South wall penthouse West
U	BL	BPR026	roof exh fan - South wall penthouse Mid
U	BL	BPR028	HCE cell evacuation vacuum exhaust
U	BL	BPR025	roof exh fan - South wall penthouse Mid
U	BL	BPR024	roof exh fan - South wall penthouse East
U	BL	BP002	post HCE stock tank vent
U	BL	BPA008	#4F-1 HCE seal tank
U	BL	BPA001B	5F washer seal tank vent
U	BL	BPA005	#3 washer seal tank overflow sewer
U	BL	BPR018	ClO2 tower scrubber exh
U	BL	BPA015	5A,1F,2F vacuum pump exhaust
U	BL	BPA002H	3 washer hood exhaust fan
U	BL	BPA010	sewerbox CCE washer sealtank
U	BL	BPA014	combined HCE seal tank vent
U	BL	BPR023	"old screen tank" w/Cl2 scrubber vent
U	BL	BP009	exh fan-S side 2R floor-West

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
X	BL	BP014	caustic tank drain
X	BL	BPA002A	3F washer hood exhaust fan
X	BL	BPA007A	#1 hemi caustic tank
X	BL	BPR015	#5 post ClO2 washer E wall vent
X	BL	BPR019	mild E tower vent
X	BL	BPA013	detergent storage tank
X	BL	BPA001C	6F washer seal tank vent
X	BL	BPA002G	5A washer hood exhaust fan
X	BL	BPR021	Cl2 tower stock line vacuum breaker-West
X	BL	BP001	#5 pos ClO2 washer seal tank vent
X	BL	BPA007	Hemi,weak caustic storage tank vent
X	BL	BPR020	Cl2 tower stock line vacuum breaker-East
U	CD	BP003	ClO2 plant chlorate tank vent
U	CD	BP006	ClO2 plant methanol tank vent
U	CD	BP006A	ClO2 plant scrubber exhaust
U	CD	BP004	ClO2 plant chlorate solution tank vent
X	CD	BP005	ClO2 plant H2SO4 tank vent
U	EN	RB034	recovery sewer manhole
U	EN	DIG013	sewer vent SW of hot SSL tank
U	EN	ENV009	#8 pump station containment pond
U	EN	MF002	#10 SSPS open top
U	EN	ENV013	flume
U	EN	ENV012	sludge press
U	EN	ENV015	lime storage silo vent
U	EN	ENV002	milk of lime tank vent
U	EN	AP005	#1 pump station bar screen
U	EN	BPA009	sewer vent by HD stock tank
U	EN	ENV010	cinder system underflow pond
U	EN	ENV008	#8 pump station manhole
U	EN	ENV007	#3 pump station overflow pond
U	EN	ENV006	cinder screening system
U	EN	ENV005	aeration stabilization basin
U	EN	ENV004	primary clarifier
U	EN	ENV003	#3 ps manhole
U	EN	AP004	drain vent by soda ash tank
X	EN	MF006	sewer vent at NE comer Fourdrinier
X	EN	ENV014	discharge gate sump
U	LF	LF001	offsite landfill - Yulee
U	MF	MF015	bailer
U	MF	MF014	beater
X	MF	MF011	stuff box vent south
X	MF	MF010	stuff box vent north
X	MF	MF008	machine dry end #2
X	MF	MF009	machine dry end #3
X	MF	MF007	machine dry end #1
X	MF	MF013	machine wet end #2
X	MF	MF012	machine wet end #1
X	MF	MF005	machine wet end #5
X	MF	MF004	machine wet end #4
X	MF	MF003	machine wet end #3
X	MF	MF001E	finishing room roof vent #2

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
X	MF	MF001D	finishing room roof vent #1
X	MF	MF001C	finishing room wall vent #3
X	MF	MF001B	finishing room wall vent #2
X	MF	MF001A	finishing room wall vent #1
X	MF	MF001F	finishing room roof vent #3
T	PG	AP001	AP test sink hood exhaust fan
U	PG	AP008	ammonium bisulfite standpipe
U	PG	AP014	unwashed stock tank
U	PG	DIG012	chip fill cyclone relief
U	PG	BPA003	#2 RSW seal tank overflow
X	PG	AP002	sulfur burner room roof vent
X	PG	DIG011	digester press relief line #5
X	PG	AP006	sewer vacuum breaker blowgas condenser
X	PG	AP009	acid plant cooling tower exhaust
X	PG	DIG009	digester press relief line #3
X	PG	DIG010	digester press relief line #4
X	PG	AP007	HP accumulator pressure relief
X	PG	DIG001	dig bldg roof exh fan-west wall
X	PG	DIG002	roof exh fan ceiling #1 - north
X	PG	BPA006	2 wall exh fans over #1 RSW
X	PG	DIG003	roof exh fan ceiling #2
X	PG	DIG004	roof exh fan ceiling #3
X	PG	DIG005	roof exh fan ceiling #4
X	PG	DIG006	roof exh fan ceiling #5
X	PG	DIG007	digester press relief line #1
X	PG	DIG008	digester press relief line #2
U	SC	BP007	outside knot drainer
U	SC	BPR002	roof exh fan over sidehills
U	SC	BPR003	roof exh fan over Cowan screens
U	SC	BPR004	roof exh fan over knot press & Cowans
U	SC	BPR001	roof exh fan over knotters
U	SC	BPR008	roof exh fan over Bauer cleaners (west)
U	SC	BPR007	roof exh fan over Bauer cleaners (east)
U	SC	WY007	knot pile
U	SC	WP001	Graver clarifier
U	SC	BPA004	open top unblch unscrn storage tank
X	SC	BP010	unbleached stock tank vent
X	SC	BPA012	screenroom defoamer tank
X	SC	BPR006	tile tank vent box
X	SC	BPR005	roof exh fan over Jonsson knotters
T	UT	RB036	recovery floor wall vents
T	UT	RB035	recovery steam vent
T	UT	RB005	steam blowbown flashtank vent
U	UT	RB017	HCE filter vent
U	UT	RB019	recovery scrubber holdup tank vent
U	UT	RB028B	Brinks filter water drain vent 8"
U	UT	RB028A	Brinks filter water drain vent 6"
U	UT	RB039	HCE holding pond
U	UT	RB038	SSL holding pond
U	UT	RB033	recovery boiler fuel oil day tank vent
U	UT	RB027	hypo tank cooling tower treatment tank vent

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
U	UT	RB025	large oil storage tank vent
U	UT	RB024	HCE cooling tower exhaust
U	UT	RB023	SSL cooling tower exhaust
U	UT	RB015	vacuum evap barometric condenser
U	UT	RB021	recovery fluegas quench drain
U	UT	PH002	cinder sluice system
U	UT	RB018	recovery scrubber holdup tank vent
U	UT	RB001	weak HCE storage tank vent
U	UT	RB016	HCE filter surge tank vent
U	UT	RB014	A-line sour condensate tank vent
U	UT	RB013	B-line sour condensate tank vent
U	UT	RB012	HCE evap feed tank vent
U	UT	RB009	main evap condensate hotwell
U	UT	RB006	stripper heater condensate tank vent
U	UT	RB004	weak SSL tank vent
U	UT	WP002	accelator tank vent
U	UT	PH003	power house oil day tank vent
U	UT	RB022	recovery scrubber holdup tank vent
X	UT	RB029	Calgon Orlene PC341 tank vent
X	UT	PH001B	B scrubber holdup tank - open
X	UT	RB003	heavy SSL tank (north)
X	UT	RB037	thick HCE storage tank vent
X	UT	RB032	Calgon Conquor 3470 tank vent
X	UT	WP005	demineralizer caustic tank vent
X	UT	RB030	Calgon Conquor 3583 tank vent
X	UT	PH001A	A scrubber holdup tank - open
X	UT	RB026	Betz 40K cooling tower chemical tank vent
X	UT	RB020	recovery scrubber direct contact condenser
X	UT	RB011	caustic mix tank for shutdowns vent
X	UT	PH005	Calgon Boilerlguard 4520 tank vent
X	UT	RB008	B-line main evap condensate tank vent
X	UT	RB007	A-line main evap condensate tank vent
X	UT	RB002	heavy SSL tank vent, (south)
X	UT	PH004	Calgon Pretech 32 tank vent
X	UT	WP004	demineralizer H2SO4 tank vent
X	UT	PH007	Surex defoamerc tank vent
X	UT	PH006	Calgon Conquor 3583 tank vent
X	UT	RB031	Calgon Burolok 2220 tank vent
X	UT	RB010	vacuum evap condensate hotwell
U	VS	AP013	hot SSL storage tank
U	VS	AP012	filtered SSL tank
T	WY	WY003	locker room exhaust fan
U	WY	WY001	chip pit blower
U	WY	WY006	bark pile
U	WY	WY004	chip pile
U	WY	WY002	chip storage building exhaust fan
X	WY	WY005	conveyors

ATTACHMENT 2
List of Applicable Requirements for the Facility
Federally Enforceable Regulations Applicable to the Entire Facility

40CFR61.145
40CFR61.148
40CFR61.150
40CFR61.153
40CFR80.29
40CFR80.30
62-103.150
62-103.155
62-210.300(1)
62-210.300(2)
62-210.300(3)(a)
62-210.300(3)(b)
62-210.300(5)
62-210.300(6)
62-210.350(1)
62-210.350(2)
62-210.350(3)
62-210.360
62-210.370(3)
62-210.550
62-210.550
62-210.650
62-210.700(1)
62-210.700(2)
62-210.700(3)
62-210.700(4)
62-210.700(6)
62-210.900(1)
62-210.900(5)
62-212.300
62-212.400
62-212.600
62-213.205
62-213.400
62-213.410
62-213.412
62-213.420
62-213.430
62-213.440
62-213.460
62-213.900(1)
62-256
62-257
62-4.030
62-4.040
62-4.050
62-4.055
62-4.060
62-4.070
62-4.080
62-4.090
62-4.100
62-4.110
62-4.120
62-4.130
62-4.150
62-4.160
62-4.210
62-4.220

ATTACHMENT 2

State Only Enforceable Applicable Regulations Applicable to the Entire Facility

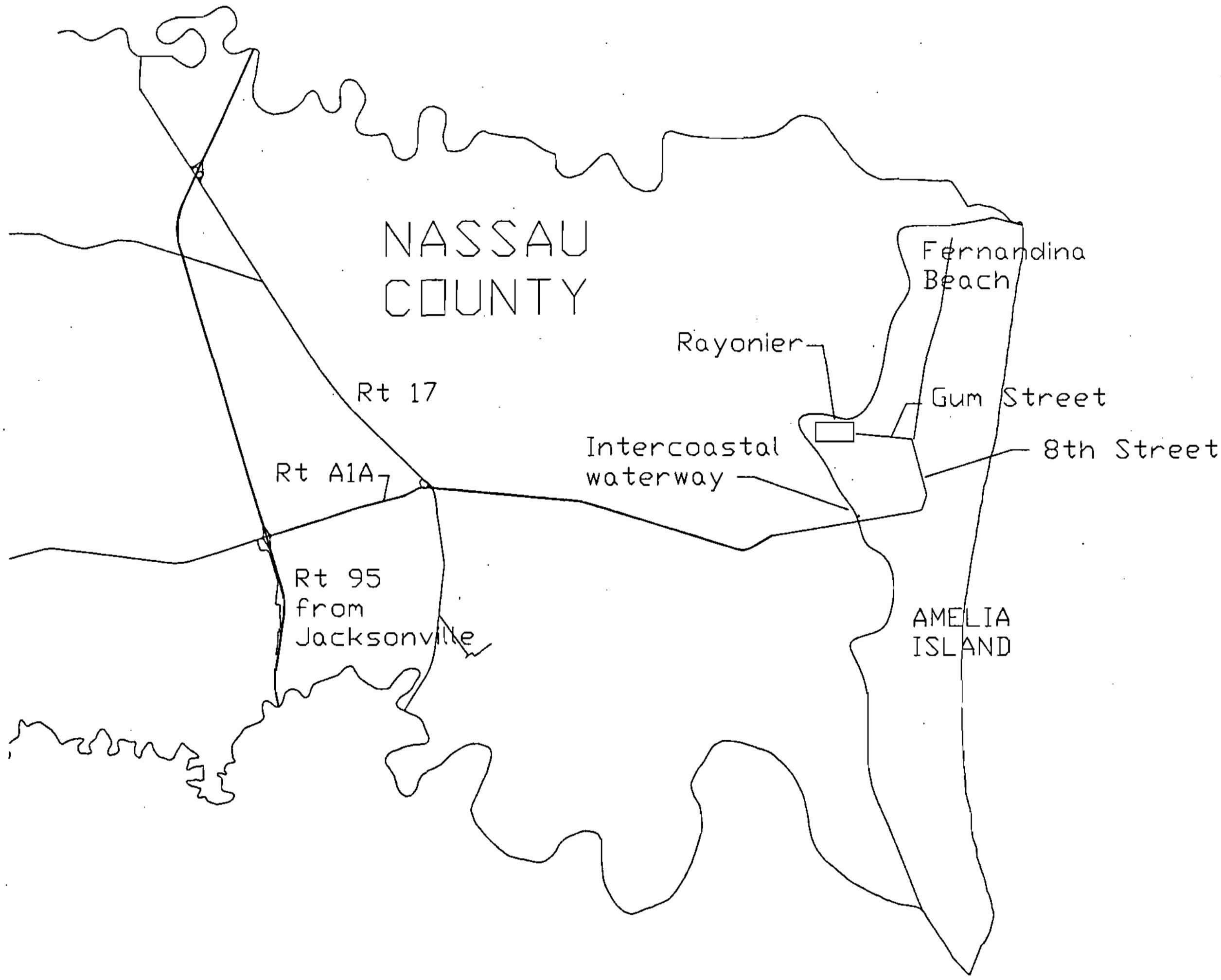
62-296.320(2)

ATTACHMENT 3

List of Pollutants Emitted from the Facility

PM10	(Particles)	A
SO2	(Sulfur Dioixde)	A
NOx	(Nitrogen Dioxide)	A
CO	(Carbon Monoxide)	A
VOC	(Volitile Organic Compounds)	A
H115	(Methanol)	A
H038	(Chlorine)	A
H043	(Chloroform)	A
PB	(Lead)	B
H047	(Colbalt)	B
H120	(MEK)	A
H001	(Acetaldehyde)	A
H106	(HCl)	B
H095	(Formaldehyde)	B
H006	(Acrolein)	B
H118	(Chloromethane)	B
H163	(Styrene)	B
CFC	(totalCFCs)	B
H128	(Methylene chloride)	B
H033	(Carbon Tetrachloride)	B
H017	(Benzene)	B
H123	(Methyl Isobutyl Ketone)	B
H169	(Toluene)	B
H041	(Chlorobenzene)	B
H085	(Ethyl benzene)	B
H187	(Xylene)	B
H166	(1,1,2,2-tetrachloroethane)	B
H061	(1,4, dichlorobenzene)	B
H174	(1,2,4-trichlorobenzene)	B
H165	(TCDD)	B
H2S	(Hydrogen sulfide)	B
H167	(Tetrachloroethene)	B
H176	(Trichloroethylene)	B
H119	(1,1,1-trichloroethane)	B
H104	(Hexane)	B
H0323	(Carbon disulfide)	B
H117	(Bromomethane)	B
	(Chlorine dioxide)	A
H113	(Manganese)	B
H114	(Mercury)	B
H133	(Nickel)	B
H148	(Phosphorous)	B

ATTACHMENT 4
AREA MAP



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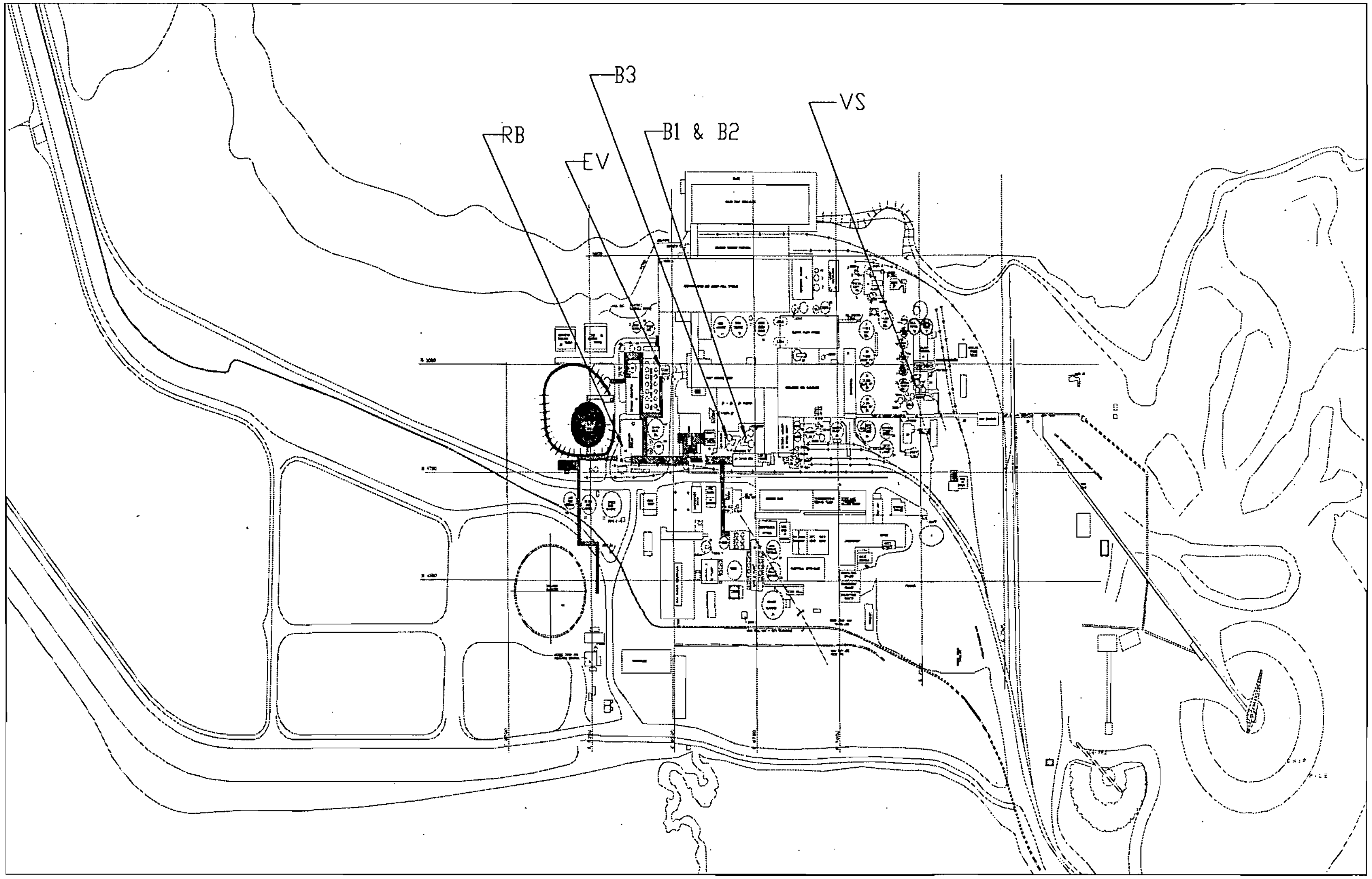
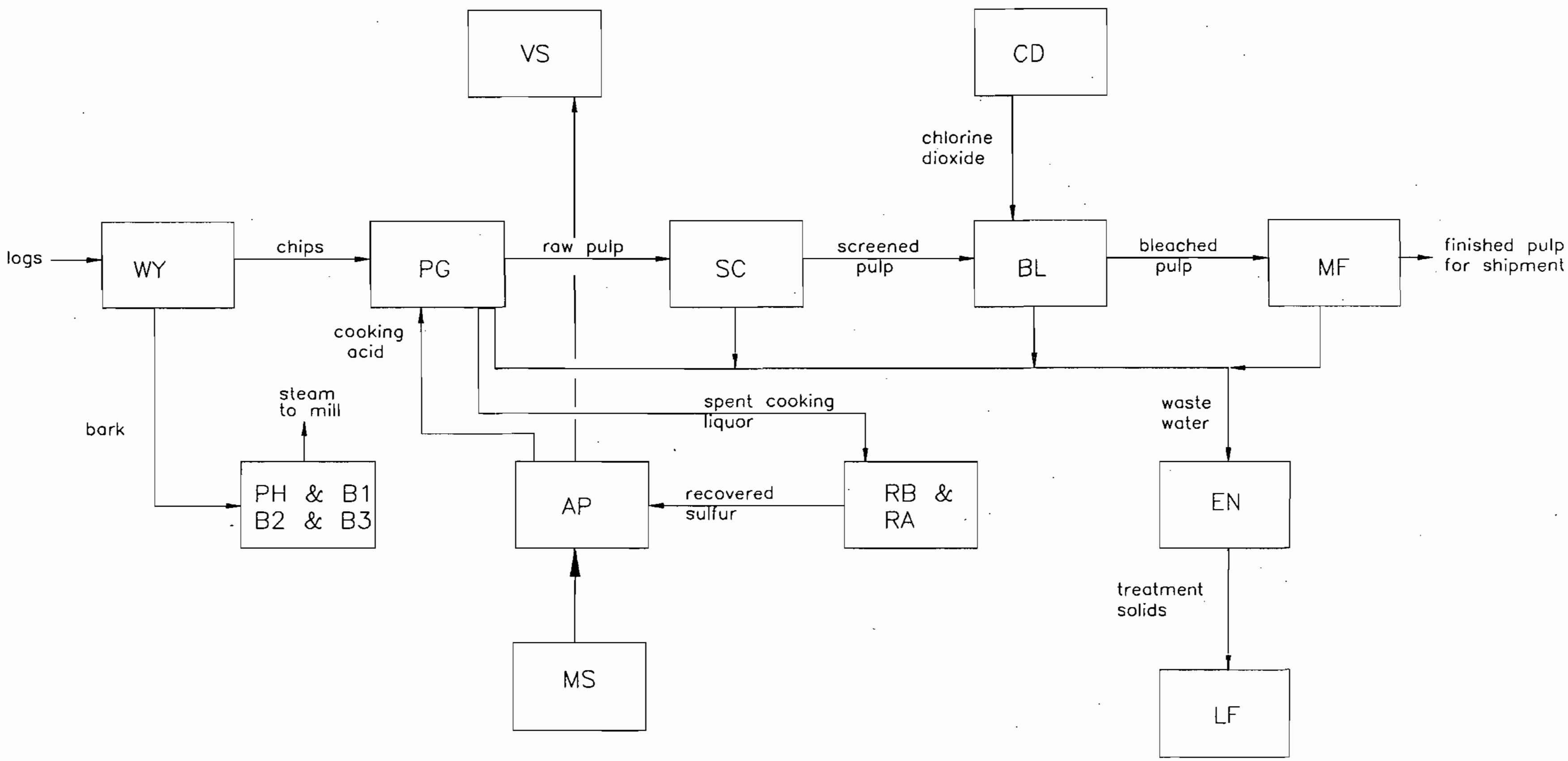
ATTACHMENT 5
FACILITY PLOT PLAN



ATTACHMENT 6
PROCESS FLOW DIAGRAM



ATTACHMENT 7
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The following emission points have fugitive particulate emissions. These fugitive emissions are controlled as indicated.

Em Pt	Emission Name	Description and Control Measures
WY001	chip pit blower	Fresh chips are pneumatically conveyed to a chip pile by a blower. It is important that fines be kept to a minimum because small chips and dust do not produce desirable fiber length. Short fiber is lost through screens and contributes to lost production. Therefore chipping technology minimizes the production of fines. Also chips are made from freshly cut pine trees having a moisture content of about 50%. This moisture aids in keeping any dust that might be made airborne.
WY004	chip pile	For all of the reasons given above, there are few fines in the chip pile. Also, frequent rains keep the chip pile sufficiently wet to control windborne particulate.
WY006	bark pile	Bark has at least 50% moisture and is created in large pieces. Bark must be hogged before burning. Therefore little becomes airborne from the pile. Furthermore, frequent rains maintains the pile at sufficient moisture to suppress dusting.
AP003	molten sulfur handling area	Fugitive emissions from molten sulfur handling areas are regulated by FAC 62-296.411. These rules require curbing and drip pans at unloading areas. Cleanup of spills must occur periodically. Logs must be kept on spills. All of these actions are implemented. They provide the means of minimizing the release of unconfined particulate matter from this source.

ATTACHMENT 8
FUGITIVE EMISSION IDENTIFICATION

The following sources are considered fugitive sources:

Fugitive Pollutants	EM Unit	Vent nr	Name
VOC,CHCl3,	BL	BPA005	#3 washer seal tank overflow sewer
VOC	BL	BP014	caustic tank drain
VOC,MEOH,AcHO	EN	ENV007	#3 pump station overflow pond
SO2	EN	DIG013	sewer vent SW of hot SSL tank
VOC,MEOH,H2S	EN	ENV004	primary clarifier
VOC,MEOH,CHCl3,H2S	EN	ENV006	cinder screening system
VOC,MEOH	EN	ENV009	#8 pump station containment pond
VOC,MEOH,CHCl3,H2S	EN	ENV010	cinder system underflow pond
VOC,MEOH,H2S	EN	ENV012	sludge press
VOC,MEOH,CHCl3	EN	ENV013	flume
VOC,CHCl3	EN	ENV014	discharge gate sump
SO2,VOC,MEOH,CHCl3,ClO2	EN	AP005	#1 pump station bar screen
VOC	EN	BPA009	sewer vent by HD stock tank
VOC,MEOH,AcCO	EN	MF002	#10 SSPS open top
VOC,MEOH,CHCl3,H2S	EN	ENV005	aeration stabilization basin
VOC, H2S,PM	LF	LF001	offsite landfill - Yulee
PM	MS	AP003	molten sulfur handling area
VOC,MEOH,SO2	PG	BPA003	#2 RSW seal tank overflow
VOC,SO2	SC	WY007	knot pile
VOC,SO2,MEOH	SC	BPA004	open top unblch unscrn stroage tank
VOC,MEOH	SC	WP001	Graver clarifier
SO2,VOC,MEOH	SC	BP007	outside knot drainer
SO2,MEK,AcHO,MEOH	UT	RB038	SSL holding pond
VOC,MEOH,CHCl3,H2S	UT	PH002	cinder sluice system
VOC,MEOH	UT	RB009	main evap condensate hotwell
VOC,SO2	UT	RB021	recovery fluegas quench drain
MEOH,VOC	UT	RB039	HCE holding pond
VOC,MEOH	UT	RB010	vacuum evap condensate hotwell
PM,VOC	WY	WY001	chip pit blower
VOC	WY	WY005	conveyors
VOC,PM	WY	WY006	bark pile
VOC,PM	WY	WY004	chip pile

ATTACHMENT 9
LIST OF PROPOSED INSIGNIFICANT ACTIVITIES

The following sources are proposed as exempt, and as such are not required to be further classified or described in this application:

EM Unit	Vent nr	Name	Exempt Just
BL	BPA013	detergent storage tank	Tergetal - low vapor pressure per MSDS
BL	BPA001C	6F washer seal tank vent	HAP measures below threshold
BL	BPA002A	3F washer hood exhaust fan	VOC measures nondetect
BL	BPA002G	5A washer hood exhaust fan	VOC measures below threshlod
BL	BPA007	Hemi,weak caustic storage tank vent	{
BL	BP001	#5 pos ClO2 washer seal tank vent	CO & ClO2 measurements below thresholds, no VOC expected
BL	BPR021	Cl2 tower stock line vacuum breaker-	VOC,chloroform and flow measured at nondetect
BL	BPR020	Cl2 tower stock line vacuum breaker-East	VOC,chloroform and flow measured at nondetect
BL	BPR019	mild E tower vent	VOC measured below threshold
BL	BPR015	#5 post ClO2 washer E wall vent	VOC and CO measured below threshold
BL	BPA007A	#1 hemi caustic tank	{
BL	BPA011	6F tray caustic tank vent	methanol measured below threshold
BL	BP014	caustic tank drain	VOC measures below threshold
CD	BP005	ClO2 plant H2SO4 tank vent	Assume no organic contaminants, H2SO4 not regulated
EN	ENV014	discharge gate sump	surface area <1% of ASB surface area, late in treatment system, VOC emissio
MF	MF011	stuff box vent south	similar vents measure less than threshold
MF	MF010	stuff box vent north	similar vents measure less than threshold
MF	MF008	machine dry end #2	VOC measured less than threshold
MF	MF009	machine dry end #3	VOC measured less than threshold
MF	MF007	machine dryend #1	VOC measured less than threshold
MF	MF001A	finishing room wall vent #1	VOC measured less than threshold
MF	MF013	machine wet end #2	VOC measured less than threshold at similar mill
MF	MF001E	finishing room roof vent #2	VOC measured less than threshold
MF	MF012	machine wet end #1	VOC measured less than threshold at similar mill
MF	MF005	machine wet end #5	VOC measured less than threshold
MF	MF004	machine wet end #4	VOC measured less than threshold
MF	MF003	machine wet end #3	VOC measured less than threshold
MF	MF001F	finihsing room roof vent #3	VOC measured less than threshold
MF	MF001B	finishing room wall vent #2	VOC measured less than threshold
MF	MF001C	finishing room wall vent #3	VOC measured less than threshold
MF	MF001D	finishing room roof vent #1	VOC measured less than threshold
MF	MF006	sewer vent at NE corner Fourdrinier	VOC monitoring above similar waste water measures less than threshold
PG	DIG011	digester press relief line #5	Normally closed safety valve
PG	DIG001	dig bldg roof exh fan-west wall	Operating area ventilation, SO2 level estimate below threshold
PG	AP002	sulfur burner room roof vent	Operating area ventilation, SO2 level estimate below threshold
PG	DIG002	roof exh fan ceiling #1 - north	Operating area ventilation, SO2 level estimate below threshold
PG	AP006	sewer vacuum breaker blowgas	HAP mostly nondetect, normally negative flow
PG	AP007	HP accumulator presssure relief	Safety device
PG	DIG003	roof exh fan ceiling #2	Operating area ventilation, SO2 level estimate below threshold
PG	AP009	acid plant cooling tower exhaust	Fresh water cooling device, no contaminated inputs
PG	DIG010	digester press relief line #4	Normally closed safety valve
PG	DIG004	roof exh fan ceiling #3	Operating area ventilation, SO2 level estimate below threshold
PG	DIG005	roof exh fan ceiling #4	Operating area ventilation, SO2 level estimate below threshold
PG	DIG006	roof exh fan ceiling #5	Operating area ventilation, SO2 level estimate below threshold
PG	DIG007	digester press relief line #1	Normally closed safety valve
PG	DIG008	digester press relief line #2	Normally closed safety valve
PG	DIG009	digester press relief line #3	Normally closed safety valve

ATTACHMENT 9
LIST OF PROPOSED INSIGNIFICANT ACTIVITIES

continued from previous page

EM Unit	Vent nr	Name	Exempt Just
SC	BP010	unbleached stock tank vent	VOC measured below threshold
SC	BPR006	tile tank vent box	VOC measured below threshold
SC	BPR005	roof exh fan over Jonsson knotters	VOC measured below threshold
SC	BPA012	screenroom defoamer tank	neg. vapor pressure per MSDS
UT	RB002	heavy SSL tank vent, (south)	VOC & HAPs measured less than threshold
UT	RB011	caustic mix tank for shutdowns vent	VOC measured less than threshold
UT	RB003	heavy SSL tank (north)	VOC & HAPs measured less than threshold
UT	RB037	thick HCE storage tank vent	VOC measured below threshold
UT	RB032	Calgon Conquor 3470 tank vent	aqueous solution of soluble substance per MSDS
UT	RB031	Calgon Burolok 2220 tank vent	low vapor pressure per MSDS
UT	RB030	Calgon Conquor 3583 tank vent	aqueeous solution of soluble substnace per MSDS
UT	RB029	Calgon Orlene PC341 tank vent	no indication of hig vapor pressure on MSDS
UT	WP004	demineralizer H2SO4 tank vent	Assume no organic contaminants, H2SO4 not regulated
UT	RB020	recovery scrubber direct contact	VOC measures less than threshold
UT	PH001A	B scrubber holdup tank - open	Measured HAPs below threshold
UT	RB010	vacuum evap condensate hotwell	VOC & HAPS measured less than threshold
UT	RB008	B-line main evap condensate tank vent	VOC & HAPs measured less than threshold
UT	RB007	A-line main evap condensate tank vent	VOC & HAPs measured less than threshold
UT	PH001B	B scrubber holdup tank - oper	Measured HAPs below threshold
UT	WP005	demineralizer caustic tank vent	Assume no organic contaminants, NaOH not regulated
UT	PH007	Surex defoamerc tank vent	{
UT	PH006	Calgon Conquor 3583 tank vent	{No VOC on MSDS
UT	PH005	Calgon Boilerlguard 4520 tank vent	low vapor pressure per MSDS
UT	PH004	Calgon Pretech 32 tank vent	high boiling point per MSDS
UT	RB026	Betz 40K cooling tower chemical tank	low vapor pressure per MSDS
WY	WY005	conveyors	mechanical conveying of wet material with few drop points

ATTACHMENT 10
LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE IV

There is only one unit affected by EPA chlorofluorocarbon rules:

1. Annex Chiller - York Screw Chiller, Model YSFCFAS5-CVAS
   Refrigerant 22, capacity 1900 lbs
   Cooling Capacity - 600 tons

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

ALTERNATE OPERATING SCENARIOS FOR PULPING EMISSION UNIT

Background

Batch digesters are operated sequentially and continuously to produce as even a flow of pulp to the rest of the mill as possible. Most of the following mill operations are continuous. Flow from the batch digesters is equalized by storing pulp in the blow pits. Blow pits are tanks into which the hot pulp is forced by residual pressure remaining in the digester.

Digesters go through a number of cycles each day as each one cooks its batch of chips into pulp and blows that cook into a blow pit. The steps in each cycle are:

(1) Filling - First the digester is filled with chips from the chip storage building. After capping, the digester is filled with cooking acid.

(2) Cooking - Steam is added to the filled digester and when at temperature and pressure the chips are held at temperature and pressure for a specified period of time.

(3) Drag down - During this period the temperature and pressure inside the digester are gradually reduced and the gases sent to the Acid Plant Recovery system to recover cooking chemicals, predominately sulfur dioxide and heat.

(4) Blow - Residual pressure inside the digester forces the hot pulp into the blow pit.

These steps requires a total of 325 minutes per batch. With the existing 5 digesters at the Fernandina Beach facility, there are a total of 7200 digester minutes available per day. Since the total cycle time for each batch is 325 minutes, using 5 digesters the mill can produce about 22 batches a day.

5 digesters x 24 hours/day x 60 minutes /hr = 7200 digester minutes/day

$$\frac{7200 \text{ digester minutes/day}}{325 \text{ digester-minutes/batch}} = 22.1 \text{ batches/day}$$

However, the quickness at which a digester is prepared for cooking after a blow is monitored by digester spacing. This is the time allowed between each digester in sequence and therefore controls the rate at which the digesters as a system operate.
Digester spacing historically as been about 65 minutes. Although at times it has been longer because the digester can not be readied in time or other factors in the mill slow the entire process and digester spacing increases which reduces production.

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

A Modification to Title V Permit 0890004-010-AC was made on February 5, 2002, that recognized an Alternate Method of Operation involving digesters. The addition of a 6th digester allowed for removing a digester from service without loss of production. Significant rebricking was anticipated. The Alternate Operating Method provided for a slower digester operation thereby not achieving the production and consequent emissions that adding another digester would achieve. This slower operating rate would increase quality. Below is the description of the Scenarios.

Alternate Operating Scenario #1

This Alternate Operating Scenario anticipates the use of six digesters. Because Rayonier has committed to totally rebricking all of its existing four brick-lined digesters, each one of the existing digesters will be removed from service and number 6 digester will replace that digester in its sequence. This is a continuation of the normal operation for the Fernandina Beach mill since 1952 when number 5 digester was installed.

Alternate Operating Scenario #2

This Alternate Operating Scenario uses all six digesters. This is the mode of operation that will be used until digester rebricking begins and between rebricking each digester. Rebricking is expected to begin in 1999 when 2 digesters will be rebricked with the remaining digester being rebricked during 2000 (#4 digester was rebricked in 1994). Continuous operation of the new number 6 digester is necessary once the acid resistant/refractory brick is cured as hot and cold cycles cause premature refractory failure. Curing is scheduled for June 1998. Thus this Scenario will be used until the first digester is taken off line for rebricking.

When all six digesters are available, the total cycle time will be increased from the the normal 325 minutes to 390 minutes. This will maintain the same number of potential batches possible with five digesters.

6 digesters x 24 hr/day x 60 minutes/ hr = 8640 digester-hours/day

$$\frac{\text{8640 digester-hours/day}}{\text{390 minute/batch}} = \text{22.1 batches/day}$$

Potential emissions should not increase since the total number of batches possible will not increase. Some of the additional cycle time will be used to increase cooking time and some will be used to increase drag-down time and some will be used to increase digester spacing. Though the potential emissions will not change in switching between these two Alternate Operating Scenarios, actual emissions of some pollutants will decrease slightly and some could increase slightly.

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

The longer drag down time will lower the blow pressure and thus liberate more of the sulfur dioxide to the recovery system reducing the sulfur dioxide load to the vent gas scrubber. The longer cycle time planned will allow a slower, less harsh cooking which should increase the molecular weight of the broken lignin molecule fragments that result from cooking. These larger molecules will have lower vapor pressure and higher boiling point and thus the VOCs will not evaporate so readily. Also higher yields from a given quantity of chips should be possible because the less harsh cooking conditions will destroy less cellulose.

With only five digesters, the maximum number of batches possible is 22 as can be seen from the above calculations. However, this is not always achievable with five digesters as various little delays increase spacing and thereby decrease the number of batches cooked per day. Use of six digesters instead of five should increase the actual number of batches cooked per day because more digesters will make for a smoother operation and allow more time to deal with the minor delays without missing scheduled cook time. Thus the actual number of digesters cooked may increase slightly, but overall emissions are not expected to increase significantly.

Regulations regarding Alternate Operating Scenarios require the source to keep records of when each Scenario is being used. Further, to ensure the digester system operation is limited to less than a significant increase in pollutants, additional recordkeeping will be required. The digester log contains sufficient information to satisfy both of these requirements. The number of digesters operating and the digester spacing are both recorded on this log, therefore the required monitoring data will be maintained and available if requested by the agency.

This Alternate Operating Method of Operation was further interpreted in the letter, a copy of which is inserted on the next 2 pages.

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

February 27, 2001

Certified Mail, Return Receipt Requested

Mr. Christopher Kirts
Department of Environmental Protection
7825 Bay Meadows Way, Suit B200
Jacksonville, FL 32256-7577

RE: Alternate Operating Scenario for Digester Emission Unit Group
Fernandina Dissolving Sulfite Mill, Fernandina Beach, FL
Title V Permit Number 08900004-005AV

Dear Mr. Kirts:

On June 1, 1998 Rayonier submitted a letter reporting that it was adding an additional digester at its Fernandina Beach, FL dissolving sulfite pulp mill in order to facilitate the re-bricking of its digesters. As you will recall, this is a safety issue for the industry following the digester explosion at Panama City, FL. More frequent re-bricking was considered necessary to address these safety concerns. In order not to lose at least 20% of its production during these lengthy re-bricking projects Rayonier decided to add the new digester to replace the production lost by the digester taken out of service. Recognizing that there were times when no digester was out of service Rayonier indicated that it was limiting the operation of all its digesters in order to avoid any NSR (PSD) implications.

Specifically, when a digester was out for maintenance the new digester would function like one of the regular, existing digesters. There would be no concerns about modification nor increase in emissions in this case. At other times, when all 6 digesters were available for use, all digesters would be controlled by limiting the time between digesters. This ensured that they operated at the same rate as when there were only 5 digesters. That is, that digester operation would be limited to 22.1 digesters per day. These two cases were presented as Alternate Operating Scenarios in a modification to the application to the Title V permit for the facility.

In the same June 1 letter, we indicated that having 6 digesters would allow occasional days to have more digesters than 22. We have now re-evaluated this in the light of operating experience and find that any potential emission increase associated with digester operation should be limited by the significance levels in the PSD program. To avoid PSD permitting this equipment should not increase emissions by more than these significance levels, and thereby avoid being a modification. These significance levels are about 2.3% of the reported emissions in 1996. The highest production in the past several years prior to installation of the number 6 digester was

149,957 ADMT/year. Assuming that emissions directly follow production, a 2.3% increase in production would limit production to 153,400 ADMT/year.

Though this production rate has never been achieved, Rayonier will be regarding this as a limit to avoid PSD permitting for the addition of number 6 digester. This shifts the enforcement parameter for this Alternative Operating Scenario from limiting the number of digesters per day to limiting total annual production. Obviously production is a closely followed number and Rayonier will control its operation to less than 153,400 ADMT/yr.

If you have questions regarding this matter please contact David Tudor at (904) 277-1452 or E-mail at david tudor@rayonier.com.

Yours very truly,

W. Michael Burch
General Manager

MWB/dig6AltOpsScenAnnual

ATTACHMENT 12
RISK MANAGEMENT PLAN VERIFICATION

EPA United States Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

June 24, 1999

Larry Coleman
Rayonier
Foot of Gum Street
Fernandina Beach, FL 32034

EPA Facility ID#:	**1000 0005 0972**
Postmark Date:	**06/15/1999**
Anniversary Date:	**06/15/2004**

NOTIFICATION LETTER: COMPLETE RMP

The U.S. Environmental Protection Agency (EPA) received your Risk Management Plan (RMP) dated with the above postmark date. **This letter notifies you that your RMP is "complete" according to EPA's completion check.** The completion check is a program implemented by EPA to determine whether a submitted RMP includes the minimum amount of information every RMP must provide. The completion check does not assess whether a submitted RMP should have provided additional information or whether the information it provides is accurate or appropriate. In other words, it does not indicate that the RMP meets the requirements of 40 CFR Part 68.

Please note the anniversary date indicated above. Your RMP must be revised and updated by this date or earlier as required by 40 CFR §68.190. Please also note your EPA Facility ID number as identified at the top of this letter; all future Risk Management Plan submissions, corrections and other correspondence must include this number.

Your RMP (excluding the Offsite Consequence Analysis data) can be viewed on RMP*Info™, a national database on the Internet at http://www.epa.gov/enviro.

ATTACHMENT 12
RISK MANAGEMENT PLAN VERIFICATION

Facility Name: Rayonier Fernandina Beach Dissolving Sulfite Mill
EPA ID: 1000 0005 0972

If you have any questions, please call one of the following numbers:

(1) For RMP rule interpretation questions, call the EPCRA Hotline at (800) 424-9346 or (703) 412-9810 (in the D.C. Metro area).

(2) For RMP*Submit installation and software questions, or information on the status of your RMP, contact the RMP Reporting Center at (703) 816-4434, or write to the:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA 22116-3346

(3) For more information on the Risk Management Program, you can contact your Implementing Agency. Your Implementing Agency is **Florida Department of Community Affairs, 2555 Shumard Oak Boulevard, Tallahassee, FL, 32399, Phone: 850-413-9970.**

Thank you for your cooperation in this matter.

Sincerely,

RMP Reporting Center

Enclosure:
Risk Management Plan (if submitted on paper)

ATTACHMENT 13
COMPLIANCE CERTIFICATION

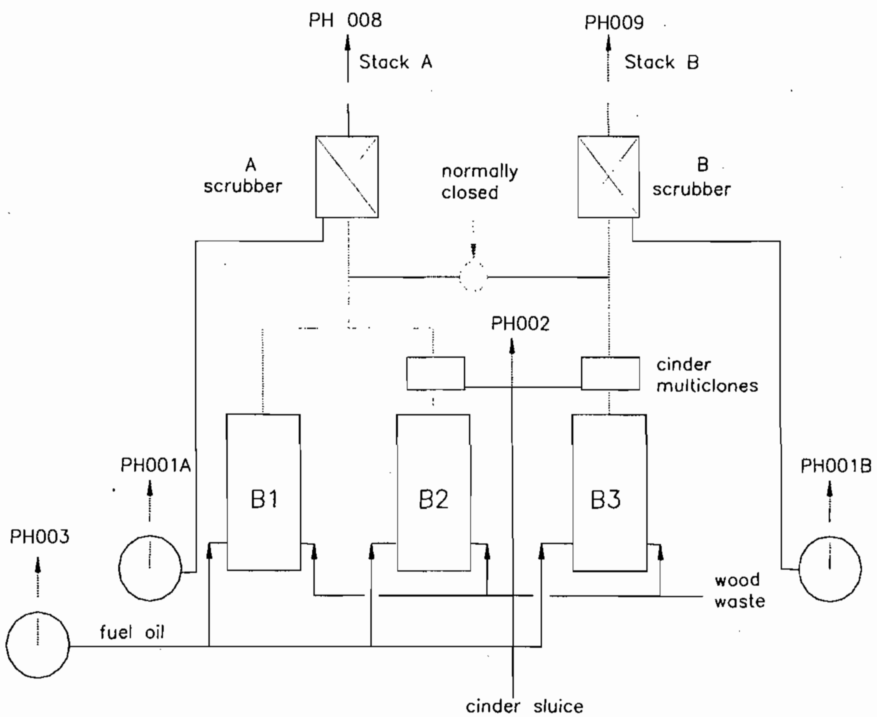
I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which this report is being submitted. Subject to the conditions set forth in the Compliance report, Attachment 34, I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

W M Burch — 10/5/02

W. M. Burch — Date

ES-NCR/CADD: K:\CADD\JAX\72780002.097\004.dwg Xrefs: <NONE>
Scale: 1 = 1.00 DimScale: 1 = 1.00 Date: 7/1/97 Time: 9:50 AM Operator: JBRUCE

ATTACHMENT 14
B1, B2 AND B3 PROCESS FLOW DIAGRAM



LEGEND

- Equipment & pulp flow
- Enclosures W/vents
- Enclosed gas flow
- PH002 Emission point, see attachment 1 for list of emission point codes

emcon

DATE	7/01/97
DWN	JWB
APP	MR
REV	
PROJECT NO. 727780.002.097	

ATTACHMENT 13

B1, B2 AND B3 EMISSION UNITS FLOW DIAGRAM

ATTACHMENT 15
FUEL SPECIFICATIONS

The following represent typical fuel analyses for the fuels used at this source.

NR 6 FUEL OIL

Description:............................Standard, commercially available residual, nr 6, fuel oil.
density....................................8.25 lb/gal
heat value...............................150,000 Btu/gal
percent Sulfur by weight........Not to exceed 2.5%
percent nitrogen by weight.....0.6%
percent ash by weight.............0.03%
Additives................................None

RED LIQUOR

Description:............................evaporated spent sulfite liquor
density....................................10.01 - 10.84 lb/gal
percent solids.........................58%
heat value...............................9330 Btu/lb dry basis
percent Sulfur by weight........6.9% dry basis
percent nitrogen by weight.....2.96% dry basis
percent ash by weight.............0.5% dry basis
additives used:........................None

BARK

Description:............................Cork-like outside covering of trees, removed before logs are chipped, hogged and burned as fuel.
density....................................9 ODlb/cu ft approx. 50% moisture
heat value...............................9030 Btu/OD lb, 4500 Btu/lb as is
percent Sulfur by weight........0.1%
percent nitrogen by weight.....unk
percent ash by weight.............2.9%
Additives Used.......................None

ATTACHMENT 16
B1, B2, & B3 DESCRIPTION OF CONTROL EQUIPMENT

DESCRIPTION OF CONTROL EQUIPMENT

POWER BOILER STACKS A & B:

Each of the two combination wood waste and oil boilers have multi-cyclone units with no re-injection of fly-ash. Under normal operations power boilers 1 and 2 feed A scrubber and boiler 3 feeds B scrubber. The scrubbers are AirPol "Wet Approach" Venturi with a throat approximately 7.5 ft. diameter gas inlet by 22 ft. high round cross section. The Venturi pressure drop is 15 inches water pressure. The Cyclone Entrainment Separator is 17 ft. in diameter and 39 ft high. 7,500 gallon Scrubbing Liquid Recycle Tanks are used. The scrubbers have met the particulate emissions standards routinely since installed in 1975. Sulfur dioxide emissions are consistently controlled by utilizing fuel oil with 2.5% sulfur content or less.

ATTACHMENT 17
B1, B2 & B3 DESCRIPITION OF STACK SAMPLING FACILITIES

POWER BOILER STACKS A AND B:

For each stack there are two sample ports oriented at a 90 degree angle, 56.5 feet (5.5 stack diameters) from the stack discharge and 40 feet 4 stack diameters from any upstream changes in stack dimensions. A railed sampling platform for each stack with a bridge between stacks is provided along with a sampling equipment monorail for each port. Ladders with safety guards are provided to access the sampling platforms.

ATTACHMENT 18
B1, B2 & B3 ADDITIONAL APPLICABLE REQUIREMENTS

B1 - Permit AO45-183504

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1		Compliance will be demonstrated by monitoring fuel fired to this boiler and assuming 150000 Btu/gal heat content for the fuel.
Specific Condition 2	Keep	Compliance will be demonstrated by monitoring the operating rate during the test.
Specific Condition 3	Keep	Compliance will be demonstrated by examining daily fuel usage and dividing by 24 and comparing this number to the rate at the last test.
Specific Condition 4	Keep.	Compliance will be demonstrated by quarterly EPA method 5 stack tests. When equivalent surrogate methods are developed (See CAM Plan - Attachment 19) suitable for constant emission monitoring such surrogate methods will be used.
Specific Condition 5	Remove. This condition is not required to assure compliance with the emission limitation for this emission unit.	Compliance will be demonstrated by quarterly stack tests. All modes of operation have been tested.
Specific Condition 6	Keep	Compliance is demonstrated by submittal of the required information.
Specific Condition 7	Remove. This is described in Attachment 17	N/A
Specific Condition 8	Remove. This condition is superseded by rule.	N/A
Specific Condition 9	Remove. This condition is superseded by rule.	N/A
Specific Condition 10	Remove. This condition is superseded by rule.	N/A
Specific Condition 11	Remove. This condition is superseded by rule.	N/A

ATTACHMENT 18
B1, B2 & B3 ADDITIONAL APPLICABLE REQUIREMENTS

B2 - Permit AO45-183506

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1	Keep.	Compliance will be demonstrated by monitoring fuel fired to this boiler and assuming 150000 Btu/gal heat content for the fuel.
Specific Condition 2	Keep	Compliance will be demonstrated by monitoring the operating rate during the test.
Specific Condition 3	Keep	Compliance will be demonstrated by examining daily fuel usage and dividing by 24. and comparing this number to the rate at the last test.
Specific Condition 4	Keep.	Compliance will be demonstrated by quarterly EPA method 5 stack tests. Correlations with other parameters are being pursued. When equivalent surrogate methods are developed (See CAM Plan - Attachment 19) suitable for constant emission monitoring such surrogate methods will be used.
Specific Condition 5	Remove. this condition is not required to assure compliance with the emission limitation for this emission unit.	Compliance will be demonstrated by
Specific Condition 6	Keep	Compliance is demonstrated by submittal of the required information.
Specific Condition 7	Remove. This is described in Attachment 17	N/A
Specific Condition 8	Remove. This condition is superseded by rule.	N/A
Specific Condition 9	Remove. This condition is superseded by rule.	N/A
Specific Condition 10	Remove. This condition is superseded by rule.	N/A
Specific Condition 11	Remove. This condition is superseded by rule.	N/A

ATTACHMENT 18
B1, B2 & B3 ADDITIONAL APPLICABLE REQUIREMENTS

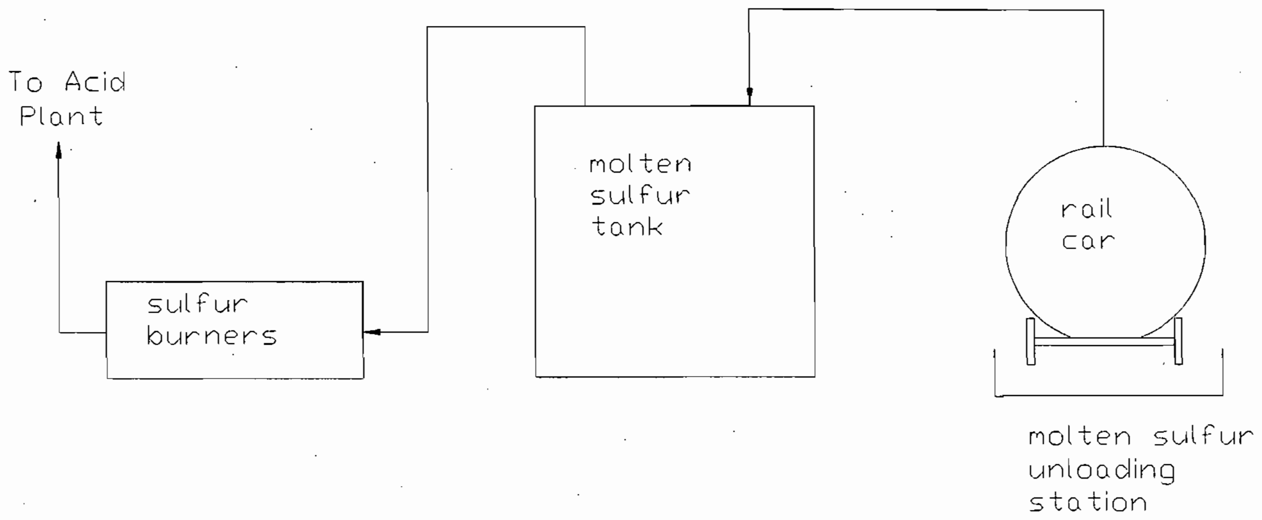
B3 - Permit AO45-183507

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1	Keep.	Compliance will be demonstrated by monitoring fuel fired to this boiler and assuming 150000 Btu/gal heat content for the fuel.
Specific Condition 2	Keep	Compliance will be demonstrated by monitoring the operating rate during the test.
Specific Condition 3	Keep	Compliance will be demonstrated by examining daily fuel usage and dividing by 24. and comparing this number to the rate at the last test.
Specific Condition 4	Keep.	Compliance will be demonstrated by quarterly EPA method 5 stack tests. When equivalent surrogate methods are developed (See CAM Plan - Attachment 19) suitable for constant emission monitoring such surrogate methods will be used.
Specific Condition 5	Remove. this condition is not requiered to assure compliance wiht the emission limitation for this emission unit.	Compliance will be demonstrated by
Specific Condition 6	Keep	Compliance is demonstrated by submittal of the required information.
Specific Condition 7	Remove. This is described in Attachment 17	N/A
Specific Condition 8	Remove. This condition is superseded by rule.	N/A
Specific Condition 9	Remove. This condition is superseded by rule.	N/A
Specifid Condition 10	Remove. This condition is superseded by rule.	N/A
Specific Condition 11	Remove. This condition is superseded by rule.	N/A

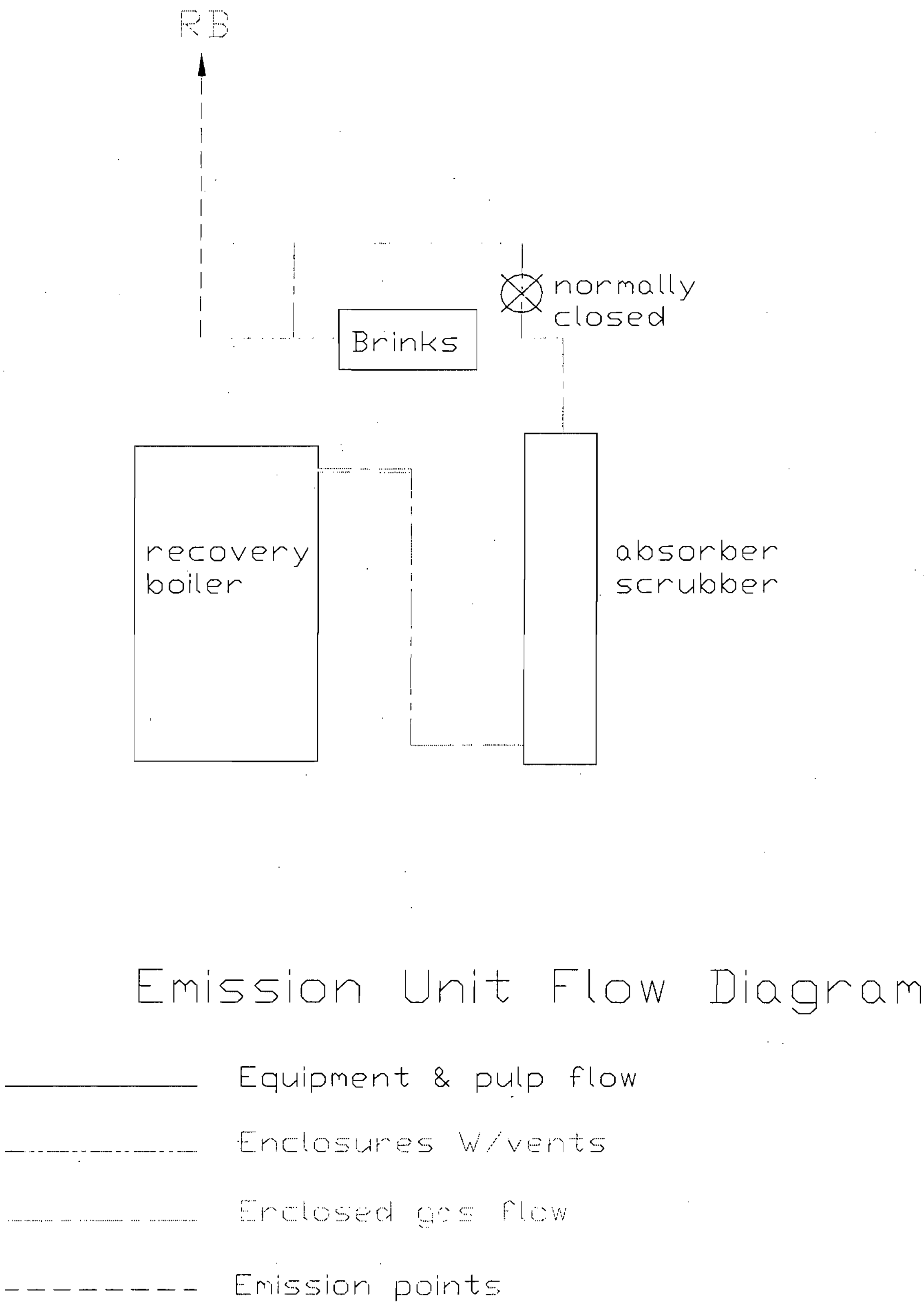
ATTACHMENT 19
CAM PLAN

Supplied as a separate document with the application, marked as Attachment 19.

ATTACHMENT 20
MS – PROCESS FLOW DIAGRAM



ATTACHMENT 21
RB – PROCESS FLOW DIAGRAM



ATTACHMENT 22
RB – DESCRIPTION OF CONTROL EQUIPMENT

RECOVERY BOILER STACK:

Emissions from the recovery boiler are controlled through a multi-stage wet scrubber and a four compartment filter unit. The first stage of scrubbing is through a small quench tower where the flue gas temperature is reduce from about 450 to 160 degrees F utilizing 80 degree water. The water from the quench stage is discharged at the bottom of the 24 ft. diameter scrubber. The first stage in the scrubber is the heat recovery section where more heat is removed from the flue gas and used to evaporate mill liquor. This section circulates about 6000 gpm of water which increases in temperature from 115 to 155 degrees. The gas temperature drops to about 135 degrees F leaving this section. The cooling section follows. This stage uses about 3500 gpm of circulation water which is indirectly cooled through a heat exchanger which receives its cooling water from a cooling tower. The gas leaving this section is about 110 degrees F. The final stage of scrubbing is a two section absorber utilizing ammonium bisulfite as the scrubbing medium. The four trays in each section have valve caps for controlled flue gas passage through the absorption liquid. Both absorption sections have heat exchangers for cooling their circulation flows of about 1000 gpm. Normally about 175 gpm of softened water is added to the upper absorption section and 18 % aqua ammonia is added to the upper circulation stream under pH control. A constant ammonia flow of about 25 gpm is added to the lower section. The upper absorber normally operates at 5.8 pH and the lower absorber at 5.2 pH. The upper absorber pH target and the lower absorber ammonia addition can be adjusted to assure that the sulfur dioxide emissions meet the permit standards. The sulfur dioxide concentration in the stack is measured continuously with a CEM.

Fly ash particulate is removed in the quench tower and the scrubber heat removal sections. However, the ammonium bisulfite absorption produces a very fine particulate which is removed using mist filters [Brinks candles]. The filter is composed of four compartments containing 52 candles each. Each candle is 24" diameter, 12' high cylinder with gas entering from the bottom inside of the cylinder. The gas then passes through 2" of wound glass fiber which filters the particulate. The top of the cylinder is sealed. Each compartment is rinsed for about 2 hours with water and evaporator condensate on an eight hour schedule. The pressure drop across the mist filter system normally ranges from 5 to 15 inches of water pressure. The recovery boiler routinely meets the permitted particulate and sulfur dioxide emissions standards utilizing these scrubbing and filtering systems.

ATTACHMENT 23
RB – DESCRIPTION OF STACK SAMPLING FACILITIES

RECOVERY BOILER STACK:

There are two sample ports oriented at a 90 degree angle, 5.5 diameters from the stack discharge and 7.7 diameters from any upstream changes in stack dimensions. A railed sampling platform is provided along with a sampling equipment monorail for each port. Ladders with safety guards are provided to access the sampling platforms.

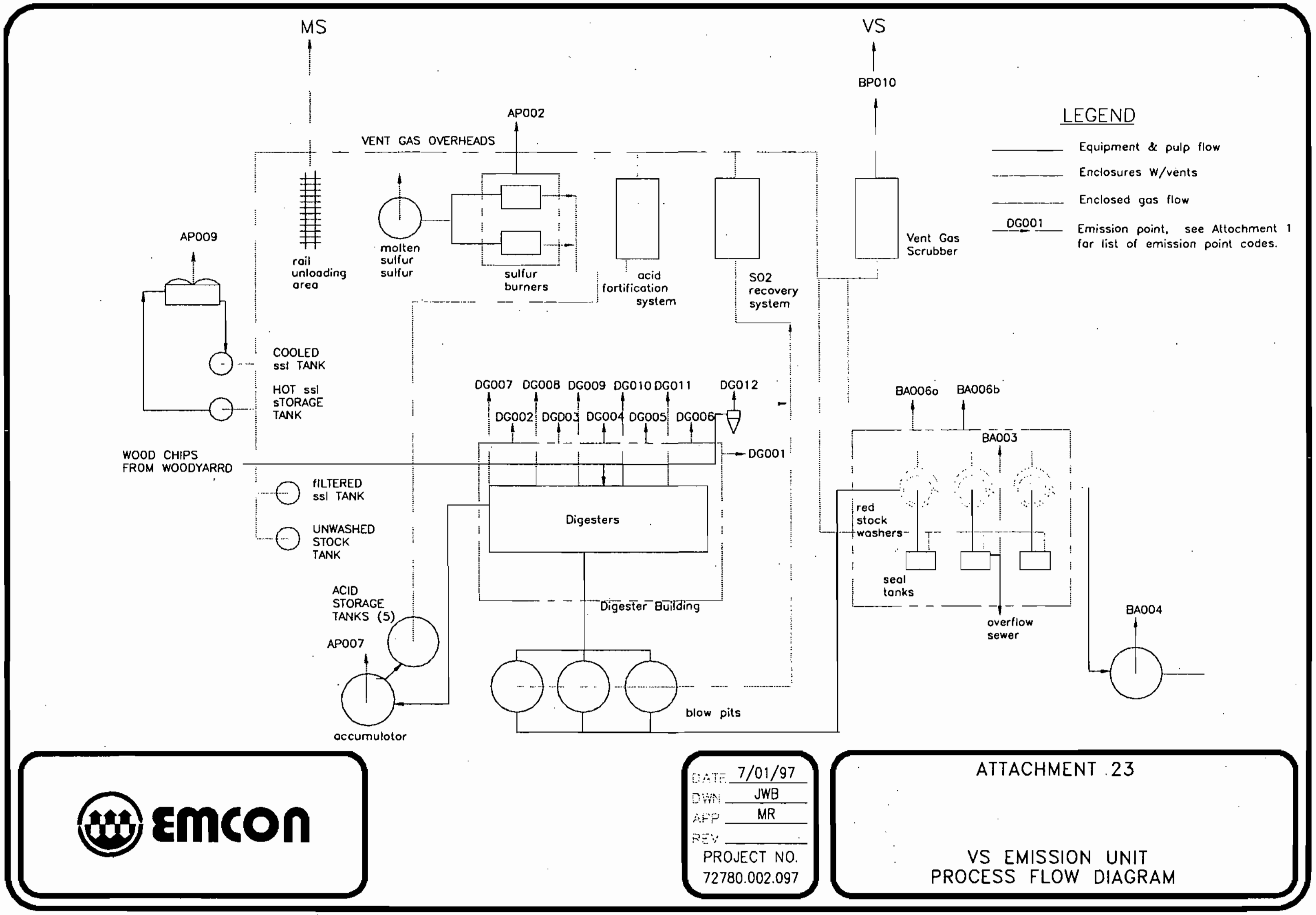
ATTACHMENT 24
RE – IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

The following are non-rule applicable requirements that apply to this emissions unit from Air Operating Permit 098004-003-AO Specfic Conditions:

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1	.	
Specific Condition 2		Compliance will be demonstrated with the PM limit by quarterly method 5 stack tests. and with the SO2 limit by continuous emission monitor. When equivalent surrogate methods are developed (See compliance Report - Attachment 11) suitable for constant emission monitoring such surrogate methods will be used.
Specific Condition 3		
Specific Condition 4		
Specific Condition 5		
Specific Condition 6		
Specific Condition 7		
Specific Condition 8	Remove condition 8C. Maintenance reports on individual equipment are unnecessary to determine if Brinks is operating.	
Specific Condition 9		
Specific Condition 10		

ATTACHMENT 25
VS – PROCESS FLOW DIAGRAM

ES-NOR/CADD: K:\CADD\JAK\72780002.097\003.dwg <refs: <NONE>
Scale: 1 = 1.00 DimScale: 1 = 2.00 Date: 7/15/97 Time: 10:18 AM Operator: JBRUCE



ATTACHMENT 26
VS –DESCRIPTION OF CONTROL EQUIPMENT

VENT GAS SCRUBBER STACK

Emissions from the cooking acid plant, the red stock washers, the unwashed stock tank, and the spent sulfite liquor tanks are collected and scrubbed in the vent gas scrubber. The vent gas scrubber consists of five sieve trays complete with weirs and downcomers. Gas flows upward through the holes in the sieve trays. Absorbate is introduced onto the top sieve tray, flowing across the tray, over a weir, and into the downcomer to the next tray below. The absorbate continues this tortuous path across the rest of the trays. The weirs insure that there will always be an absorbate level on the trays to contact the gas passing through the holes in the trays. The downcomers extend into the absorbate on the tray below, forming a liquid seal to insure the gas flows up through the holes instead of short circuiting through the downcomers. The downcomer for the bottom tray is fitted with a cup or basin to form the liquid seal. Absorbate overflows the sealing cup into the tower sump. Sodium bisulfite/sulfite absorbate is pumped from the tower sump to the sodium bisulfite storage tank. The loop is completed when the absorbate is pumped from the storage tank back to the top tray of the vent gas scrubber.

The liquid level in the tower sump is controlled by a PID type instrument in the acid plant distributive control system (DCS). The DCS has a sequential logic program (sequence table) running in the background that manages operating problems. If tower sump pump or the sump level control valve fail, the sequence logic opens a bleed off valve to prevent the sump level from building up and flowing down the gas inlet valve causing the main fan to shut down or damaged. This allows an orderly shut down for repairs. When soda ash is used, circumstances occasionally arise that cause carbon dioxide to be evolved in the tower sump pump suction. The sequential logic introduces cool water into the pump to re-establish suction.

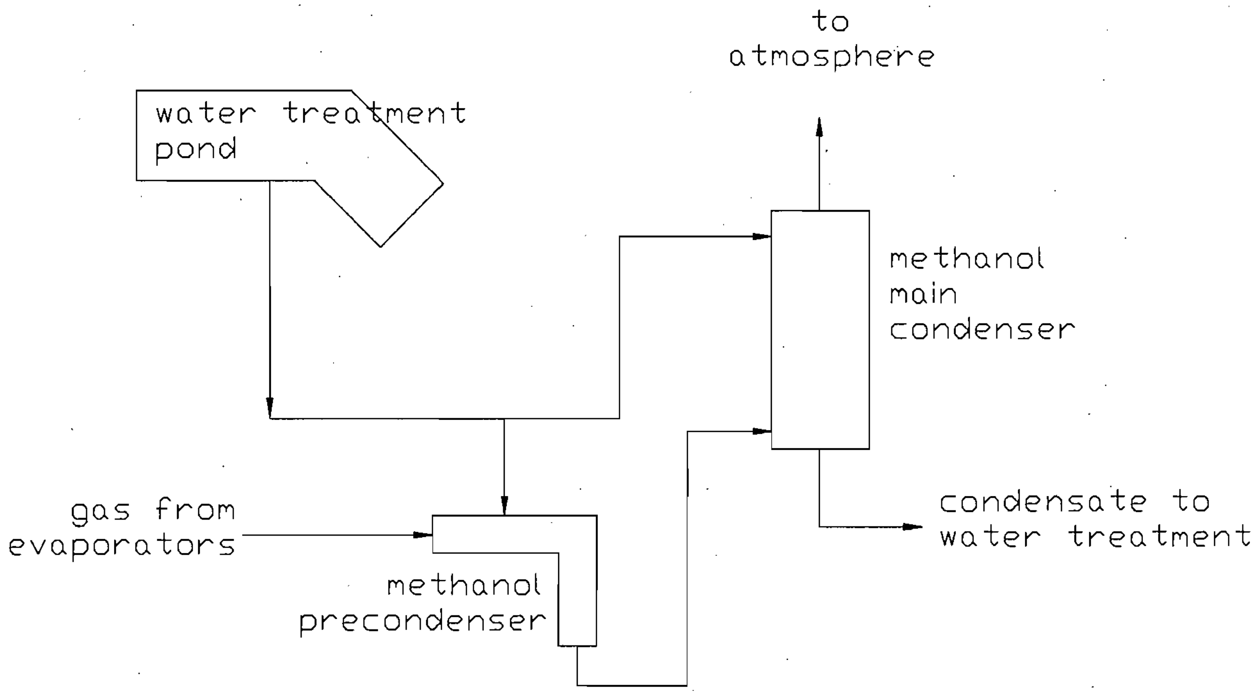
A continuous sample of absorbate flows from the sealing cup after the last tray to a pH instrument. The pH signal is transmitted to the (DCS). A PID type instrument in the DCS controls the addition of fresh 7 percent caustic soda solution or 9 percent soda ash solution into the absorbate stream entering the top tray. The controller set point is pH 6.5. The pH set point may be increased to respond to an unusually high gas loading into the vent gas scrubber. The sulfur dioxide concentration in the stack is measured with a continuous emission monitor. The DCS calculates one hour and 24 hour running averages of the sulfur dioxide concentration.

ATTACHMENT 27
VS –IDENTIFICATION OF ADDITIONAL APPLICABLE REQURIEMENTS

The following are non-rule applicable requirements that apply to this emissions unit.
From state air operating permit: 0890004-005-AO

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1		
Specific Condition 2		Compliance is determined by continuous emission monitor for SO2 for concentration. Flow is determined by the size of the constant speed fan on this system. Data is reported quarterly per Specific Condition 7.
Specific Condition 3		
Specific Condition 4		
Specific Condition 5		Compliance is determined by the physical presence of the in stack monitor and the quarterly report of data.
Specific Condition 6		.
Specific Condition 7		Complinace is demonstrated by the submiital of the quarterly report for the CMS for this emission unit.
Specific Condition 8		
Specific Condition 9		

ATTACHMENT 28
EV – PROCESS FLOW DIAGRAM



ATTACHMENT 29
EV – DESCRIPTION OF CONTROL EQUIPMENT

The evaporator vents methanol condenser

Steam is used to eject vent gases from the evaporators in order for the optimum operating pressure to be maintained on each module. This steam with the evaporator vent gases containing methanol is piped to the methanol condenser system. Unlike the digester area gas stream which has a temperature of about 120 degrees F, the steam carrying the vent gases from the evaporators is at 220 degrees F. For this reason, a pre-condenser is provided to condense the steam and allow the main condenser to condense the methanol. The water used to condense the steam and methanol is from the biological effluent treatment system.

Based on testing and an engineering study it has been determined that methanol control is based on the gas temperature leaving the main condenser.

ATTACHMENT 30
EV – DESCRIPTION OF STACK SAMPLING FACILITIES

Air Vent Data

Emission Unit No.	Emissions Unit Name	Diameter inches	Height (feet)	Est. (ACFM)	Access and testing comments
AP010	Vent Gas Scrubber	36	110	28,000	Three inch sampling ports in scrubber. Climb several flights of stairs, and a 10 ft. ladder, then up a fifty foot ladder into a round, concrete room.
RB041	Recovery Scrubber Stack	88	264	131,000	Standard sampling ports on stack used for annual Method 5 tests. Elevator to the eighth floor, up two flights of stairs, then up a fifty foot ladder from the Recovery roof.

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

STARTUP CHECKLIST - EVAPORATOR VENT COLLECTION SYSTEM	
Date: ________	**initials**
System Startup begins when cooling water flow is established to the Methanol Condensers. System Startup Beginning Time ________	
Have the electrician meg the Cooling Water Supply Pump - 21005 per SOP.	
Check the stroke on the cooling water flow control valve - 0293, 0330, 0332 and 0333	
Check the stroke on the condenser level control valve - 0106	
Check 21005 to make sure that it is primed. Refer to Startup SOP.	
Verify that all of the manual valves are lined up to pump cooling water from the ASB to the condenser and out to the sewer. Refer to the Startup SOP.	
Verify that the emergency raw water supply valve is closed.	
Verify that all piping vents and drains are closed. Refer to the Startup SOP.	
Verify that all of the manual valves are lined up to send the evaporator NCG's to the methanol condenser. Refer to the Startup SOP.	
Verify that seals are in place on 2A NCG, 2B NCG E-3A/E-3B exhaust and A and B Hogging jet exhaust valves to the Recovery Scrubber. Seal #s ________, ________, ________, ________	
Verify that all of the manual valves are lined up to send the discharge gases from the condenser through the vent gas fan and into the scrubber. *There is a manual valve on this line just before entry into the scrubber.* Refer to the Startup SOP.	
System Startup Ends and "Normal Operations" begin when A and B Line Evaps are up to target steam pressures and 11-0103 condenser gas temperature stabilizes. Startup Ending Time ________ Total Startup Time ________	
Were the Start-up Procedures followed according to the SSM Plan? If **NO**, describe actions taken. Notify Area Manager.	Yes or No
Did the Start-up result in excess emissions beyond those described in the SSM Plan? If **YES**, describe the events and how emissions were minimized:	Yes or No
Report to be reviewed by Area Manager. **Area Manager:** **Date:**	

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

SHUTDOWN CHECKLIST - EVAPORATOR VENT COLLECTION SYSTEM

Date:	**initials**
System Shutdown Begins when A and B Line Shutdown Procedures are started. Shutdown Beginning Time ____________	
A Line and B Line Evaporators have been shut down according to procedure.	
SSL Feed valves closed to the Evaporators	
A and B Line steam stops closed.	
Steam supply valves closed to A and B Line ejectors.	
After the items above have been verified proceed with Methanol Condenser Shutdown according to procedures found in Evaporators Standard Operating Procedures Manual.	
System Shutdown Ends when the Condenser Bypass valve is open and the Condenser Gas Supply valve is closed. Shutdown Ending Time __________ Total Time of Shutdown __________	
Were the Shutdown Procedures followed according to the SSM Plan? If **NO**, describe actions taken. Notify Area Manager.	Yes or No
Did the Shutdown result in excess emissions beyond those described in the SSM Plan? If **YES**, describe the events and how emissions were minimized:	Yes or No
Report to be reviewed by Area Manager. **Area Manager:** **Date:**	

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

Name: ______________________________ **Date:** __________________

Checklist Procedure for Minimization of Emissions during Startup of the Digester and Washer Vent Gas Collection System

Startup procedures began at: ________________ **AM / PM. Date:**________________

The following conditions must be verified. The Proper Sequence for Startup is **as follows:**

Verification of startup conditions

The following conditions must be verified prior to filling a digester or washing pulp.

The Proper Sequence for startup is as follows:

☐ **1.** Followed the Proper Startup Procedure for the Vent Gas Scrubber located in the Unbleached Standard Operating Procedures Manual Chapter 3, Section 3.1 Vent Gas Scrubber Startup.

Note: The following procedures are as needed.

☐ **2.** Followed the Proper Startup Procedure for the Blow Gas System located in the Unbleached Standard Operating Procedures Manual Chapter 10, Section 10.1 Blow Gas System Startup.

☐ **3.** Notified the Red Stock Washers/ Blow Pit Operator that B-5 Fan and the Scrubber are running. Red Stock Washer/ Blow Pit Operator Confirmed B-3 Fan has been started up using the startup procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.1.

☐ **4.** Followed the Proper Startup Procedure for the Digester Gas Fan #11605 located in the Unbleached Standard Operating Procedures Manual Chapter 16, Section 16.2.

☐ **5.** Red Stock Washer/ Blow Pit Operator Confirmed B-1 Fan has been started up using the startup procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.1.

Startup procedures ended at : ________________**AM / PM Date:**________________

Total time of Startup Event: ________________ **Minutes**

The Start-up Procedures were followed according to the SSM Plan: Yes _____. No _____.

If **NO**, describe actions taken: ____

____

____

If **NO**, contact Area Manager. Date: ______________ Time: ______________ Initials: ______

Report to be reviewed by the Area Manager.

Area Manager: ______________________________ Date: ____________________

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

Name: ______________________________ **Date:** __________________

Checklist Procedure for Minimization of Emissions during Shutdown of the Digester and Washer Vent Gas Collection System

Shutdown procedures began at: _____________ **AM / PM. Date:**_______________
The following conditions must be verified. The Proper Sequence for Shutdown is as follows:

☐ **1.** Red Stock Washer/ Blow Pit Operator Confirmed B-1 Fan has been shutdown using the shutdown procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.4.

☐ **2.** Followed the Proper Shutdown Procedure for Digester Gas Fan #11605 locate in the Unbleached Standard Operating Procedures Manual Chapter 16, Section 16.2a.

☐ **3.** Red Stock Washer/ Blow Pit Operator Confirmed B-3 Fan has been shutdown using the shutdown procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.4.

☐ **4.** Followed the Proper Shutdown Procedure for the Blow Gas System located in the Unbleached Standard Operating Procedures Manual Chapter 10, Section 10.7 Blow Gas System Shutdown.

Note: The following procedure will take place last.

☐ **5.** Followed the Proper Shutdown Procedure for the Vent Gas Scrubber located in the Unbleached Standard Operating Procedures Manual Chapter 3, Section 3.3 Vent Gas Scrubber Shutdown.

Shutdown procedures ended at : _____________ **AM / PM Date:**_______________
Total time of Shutdown Event: _______________ **Minutes**

The Shutdown Procedures were followed according to the SSM Plan: Yes _____. No _____.
If **NO**, describe actions taken: ____

____

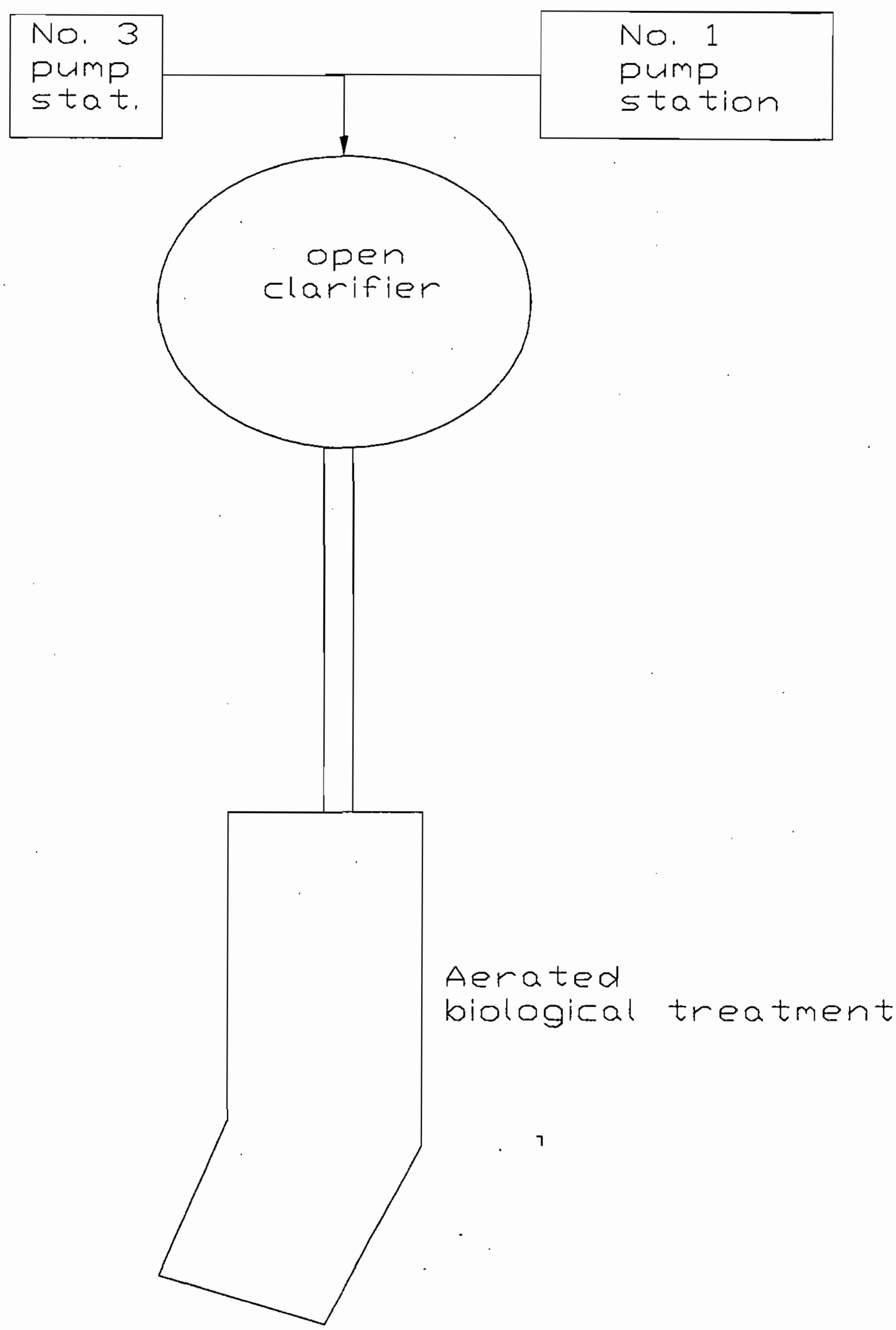
____

If **NO**, contact Area Manager. Date: _____________ Time: _____________ Initials: ______

Report to be reviewed by the Area Manager.

Area Manager: ______________________________ Date: ____________________

ATTACHMENT 32
WT – PROCESS FLOW DIAGRAM



ATTACHMENT 33
COMPLIANCE SCHEDULE

This facility is installing new technology to monitor particulate emissions on the recovery boiler and, if it provides useful surrogate information to determine compliance with particulate emission limits, the same technology will be employed to monitor the power boilers. The CAM Plan submitted with this Title V Permit renewal application describes this technology in detail.

40 CFR Part 64, the CAM Rule, anticipates compliant monitoring systems be installed to satisfy the CAM requirements at the time of the renewal of a Title V Permit. The recovery boiler monitor will be installed before the expiration date of the first Title V Permit. However, the applicant may not have acquired adequate data to justify installing the same technology on the power boilers by permit expiration. At least 6 months of operation is planned to determine if the equipment can provide a surrogate of sufficient accuracy and dependability.

If the new technology can provide a surrogate it will take atleast 6 months to acquire, install and calibrate similar monitors for the power boilers. It is anticipated that this can be accomplished by May 5, 2004.

RECOVERY BOILER
The Particulate Monitor for the Recovery Boiler will be installed and operational prior to the permit expiration on May 5. 2003. Whether it will provide a useful surrogate or indicator of compliance remains to be seen. Nevertheless, the schedule for installing and determining usability of the recovery boiler monitor is as follows:

March 18, 2003	-	Mill Maintenance Shutdown during which the monitoring equipment will be installed
March 27, 2003	-	Complete check out of newly installed equipment.
August 27, 2003	-	Complete sufficient testing to determine if monitoring system can be used to determine compliance.

POWER BOILER
Two monitors will be required for the power boilers, one for each stack,

March 18, 2004	-	Mill Maintenance Shutdown during which the monitoring equipment will be installed on A and B scrubber stacks for power boilers 1, 2 and 3.
March 27, 2004	-	Complete check out of newly installed equipment.

ATTACHMENT 34
COMPLIANCE REPORT

1. Recovery Boiler (RB)

Particulate Matter. Compliance with the emission limit for recovery boiler particulate, Stipulation of March 10, 1982 and Order of April 5, 1982 and condition 4 of permit AO45-171127, is measured four times per year through the use of EPA Method 5. Between such quarterly testing, compliance with this emission limit is monitored through quantification of the amount of particulate isokinetically collected on a filter tape as measured by a beta gauge calibrated against EPA Method 5 particulate tests, on the assumption that beta gauge readings at a given operating rate will correlate to compliance tests based on EPA Method 5. Based on this assumption, and subject to the variability and inaccuracy inherent in the test methods employed, the company states that particulate emission from the recovery boiler are in compliance with the permit limit.

Sulfur Dioxide. Compliance with the sulfur dioxide emission limit as specified in condition 4 of permit AO 45-171127 and modified in permit 0890004-001-AC, and corrected as described in this application will be measured by instack continuous emission sulfur dioxide monitor and controlling the exit gas sulfur dioxide concentration to 300 ppmv (dry basis) and the flue gas flow rate by a gas flow monitor. Based on the assumption that such parameters will adequately measure SO2 compliance, and subject to the variability and inaccuracy inherent in the test methods employed, the company states that sulfur dioxide emission from the recovery boiler are in compliance with the permit limit.

2. Power Boilers.

Particulate Matter. Compliance with the emission limit for power boiler particulate, Stipulation of march 10, 1982 is measured four times per year through the use of EPA Method 5. Between such quarterly testing, compliance with this emission limit is measured through quantification of the amount of particulate isokinetically collected on a filter tape as measured by a beta gauge calibrated against EPA Method 5 particulate tests, on the assumption that beta gauge readings at a given operating rate will correlate to compliance tests based on EPA Method 5. Based on this assumption, and subject to the variability and inaccuracy inherent in the test methods employed, the company states that particulate emissions from the power boiler are in compliance with FAC 62-296.410.

Sulfur Dioxide. Compliance with the emission limit for power boiler sulfur dioxide, Stipulation of March 10, 1982 as modified in this application is demonstrated through specification of the sulfur content of purchased oil on the assumption that maintaining a sulfur content below 2.5 weight percent will assure compliance. Based on this assumption, and subject to the variability and inaccuracy of the sulfur content of the purchased fuel the company states that the sulfur dioxide emissions are in compliance within the mass emission rates in the March 10, 1982 stipulation.

Opacity. The opacity standard, FAC 62-296.410(1)(b)(1) is not related to the attainment or maintenance of any ambient air quality standard and hence is not federally enforceable. Compliance with this standard is demonstrated through periodic use of EPA Method 9 readings of stack opacity. Subject to the variability and basic subjective inaccuracy inherent in such method, the company states that the mill is in compliance with this standard.

3. Vent Gas Scrubber

Sulfur Dioxide. Compliance with the emission limit for acid plant sulfur dioxide, Specific Condition 4 of permit AO45-182645, modified by permit 0890004005, is measured through an in stack sulfur dioxide monitor and limiting the flow through the scrubber to 28,350 dscfm. On the assumption that the scrubber fan for this emission unit is a constant speed fan and therefore flow is constant through the scrubber. Based on this assumption, and subject to the variability and inaccuracy inherent in fluctuating pressures across the fan, the company states that the sulfur dioxide emission from the acid plant stock is in compliance with the permitted mass emission rate.

4. General Nusiance Odor Standard

No declaration is being made regarding the compliance with the general nusiance odor standard [FAC 62-296.320(2)]due to its vague and subjective nature.

5. No. 6 Oil Storage Tank subject to 40 CFR Part 60, Subpart Kb

Rayonier is maintaining on site the required records per 40 CFR 60.116 (a) and (b).

COMPLIANCE ASSURANCE MONITORING PLAN
(CAM PLAN)

FOR

Rayonier, Inc.

Fernandina Beach, Florida

Dissolving Sulfite Pulp Mill

October 23, 2002

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LIST OF ATTACHMENTS

1. **Methanol Continuing Compliance Methodology Report**
2. **Specification for Beta Gauge Particulate Monitor**
   - **MSI BetaGuard® PM**
   - **The MSI BetaGuard® PM**
   - **Beta Gauge Particulate Monitoring – Theory and Practice**

I. EMISSION UNITS REQUIRING CAM PLANS

A. Cam Rule Applicability Definition

Title V of the Clean Air Act Amendments of 1990 mandated a new permit program now referred to as Title V Permitting. Title V Permits were not to require additional emission limits. However these permits were to enumerate all applicable requirements and to establish a monitoring program to track compliance with all the applicable requirements. The monitoring must conform to the applicable requirement in form and averaging time and provide the basis for the annual certification of compliance.

EPA adopted rules governing these monitoring programs in 40 CFR Part 64. The monitoring required is referred to as Compliance Assurance Monitoring (CAM) and the Plans required are referred to as CAM Plans.

CAM Plans are required of all Title V permitted emission units using air pollution control equipment to meet emission limits (applicable requirements) if "before-control" emissions are greater than that level defining a major source, unless the source is specifically exempt.

Exempted emissions units include those with stratospheric ozone protection and acid rain requirements and those with other caps are included in the Title V Permit. Also exempted are all emission units subject to NSPS (40 CFR Part 60) and NESHAP (40 CFR Part 63) promulgated after 11/15/1990, as these sources have equivalent monitoring requirements included as part of the standard. For completeness this CAM Plan includes the monitoring required under the NESHAPs program.

B. Fernandina Mill Emissions Units Requiring Cam Plans

The Fernandina mill has a Title V permit that expires May 5, 2003. Pursuant to 40 CFR Part 64 CAM Plans must be submitted with the permit renewal application. The required CAM provisions must be addressed in the Plan and included with the renewed permit.

Emission units at the Fernandina Mill have been examined and those Units to which the CAM Rule applies have been determined. This analysis has been conducted by emission unit and by pollutant because the CAM rule applies to each pollutant emitted in amounts greater than that amount which defines the unit as a major source. Generally this amount is 100 tons per year for the Fernandina Mill.

Recently new MACT standards, 40 CFR Part 63, Subpart S, were promulgated and apply to the Fernandina Mill. These standards require monitoring that complies with the CAM rule. Thus it is otherwise exempt from the CAM Rule. However, the methanol monitoring required is included in the Fernandina Mill CAM Plan for completeness.

The following sources have "before-control" emissions greater than 100 tons per year, have emission limits in the Title V Permit and rely on equipment to achieve the permit limit.

Emissions Unit	**Pollutant**	**Applicable Requirement**	**Max Potential Emission TPY**	**Control Equipment**
Combined Pulping System	SO_2	Title V Operating Permit 0890004-005-AV, Condition III(D)(2)	277.0	Packed tower reacting sulfur dioxide gas with alkali scrubbing media.
Combined Digester, Washing, Evaporator and Wasewater Treatment Systems	Methanol	40CFR63.444	232.0 *	Packed tower using cool fresh water acting as a direct contact condenser. Spray nozzles followed by a tray and disc tower using cool treated effluent as direct contact condensers.
No. 1 Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(A)(4)	70.0	Standard variable throat venturi scrubber
No. 2 Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(B)(4)	212.5	Standard variable throat venturi scrubber
No. 3 Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(C)(4)	212.6	Standard variable throat venturi scrubber

Emissions Unit	Pollutant	Applicable Requirement	Max Potential Emission TPY	Control Equipment
Recovery Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(E)(4)	295.6	Fiber type mist eliminator.
Recovery Boiler	Sulfur Dioxide	Title V Operating Permit 0890004-005-AV, Condition III(E)(5)	1,410.0	Multi-stage liquid scrubber using alkali media.

* Total emission for all regulated systems for the entire mill based on 2.2 lb./ODUBT

Other emission limitations apply to the Fernandina Mill, but these are not subject to the CAM rule:

1. The sulfur dioxide emissions from power boilers Nos. 1, 2 and 3 are limited based on 2.5 percent sulfur oil. While the sulfur dioxide emissions from each boiler exceed 100 tons per year, no control equipment is used to meet this limitation.

2. Many sources have opacity limitations. Since opacity is not emitted in terms of tons per year it is not a pollutant that is directly subject to the CAM rule. Opacity monitoring may be used to monitor compliance with a particulate emission standard. However, since the stacks subject to CAM for particulate matter at the Fernandina Mill have wet scrubbers, opacity is not used as a surrogate for particulate matter.

3. It is very difficult to estimate fugitive particulate emissions from the Molten Sulfur Handling System. But this system does emit particulate and this emission is controlled by work practices required in the regulation. The Cam Rule does not apply to the Molten Sulfur Handling System because there is no control equipment used to meet a specified emission limit. Also the emissions are expected to be much less than 100 tons per year.

II. SULFUR DIOXIDE EMISSIONS FROM PULPING

A. Emissions Unit Identification

Sulfur dioxide is used as a pulping chemical. Some sulfur dioxide is chemically combined with ammonia and the rest is dissolved in the liquid by maintaining the pulping liquors under pressure. Various unit operations in the pulping sectors of the mill provide an opportunity for sulfur dioxide emissions. The pulping sectors include the digesters, the red stock washers and the acid making equipment.

To the extent economically feasible the Fernandina Mill recovers escaping sulfur dioxide for reuse. When the concentration becomes so low that it is no longer feasible to recover the sulfur dioxide gas stream, it is further treated with a strong alkali in the Vent Gas Scrubber, a packed tower further described below, before release. This is Emission Unit Number ID 005 and designated VS in the Title V permit.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

A Consent Order dated 09-20-90 resulting from OGC Case No. 90-1028 determined Reasonably Available Control Technology (RACT) for this source based on a State of Washington Rule. This determination was placed in Operating Permit 08900004-004-AO as condition 2 which was carried forward onto the Title V Permit No. 0890004-005-AV as Condition, Condition III(D)(2). This Emission Limitation is that the Sulfur Dioxide Emission concentration is not to exceed 250 ppm. The RACT determination also required an in-stack continuous monitoring system, and this requirement has been carried forward to the Title V permit as Condition III(D)(5).

C. Control Technology Description

A large constant volume fan pulls a draft on certain pulping sector equipment emitting dilute streams containing sulfur dioxide. This gas is passed up through 10 feet of pall rings contacting a countercurrent flow of alkali, frequently a weak caustic or soda ash solution. The scrubbing media is re-circulated to a dedicated tank with constant blow-down. The makeup scrubbing media stream is added just prior to injection into the packed tower.

Packed Tower

D. Monitoring Approach

	Indicator No. 1
Indicator	Sulfur Dioxide Concentration
Measurement Approach	Installation of a Siemens Model: Ultramat SE:SSN-EN-40, Continuous Emissions Monitor for sulfur dioxide.
Indicator Range	The CEM is set to monitor through a range of 0 to 500 ppm. Any three hour average value over 250 ppm represents a exceedance of the permit limit.
Data Representativeness	The measurement approach monitors the applicable requirement directly. The monitor sample point is located in the stack just prior to release to the atmosphere.
Verification of operational Status	This CEM has been installed since March 23, 1995. It has passed all required RATA tests and several inspections by Florida DEP personnel.
QA/QC Practices and Criteria	Sulfur dioxide span gas and zero are checked daily. A 2.4% error or less must be maintained for both checks or the instrument is replaced with one from stores.
Monitoring Frequency	The monitor is monitoring sulfur dioxide concentration continuously.
Data Collection Procedures	The monitor is queried once each minute and this value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V recordkeeping requirements.

200 for expansion

E. Justification

1. Background

Various sources of sulfur dioxide are collected. The largest single source of sulfur dioxide is the digester blow and heat recovery system. This system collects gases coming from the digester either during normal operation or when a cook is finished and the pulp is blown to the blow pits. To the extent practical the sulfur dioxide is removed and reused from these strong streams before being exhausted to this collection system.

Other streams containing sulfur dioxide are collected in this system. The red stock washer hoods and seal tank vents are collected because they contain sulfur dioxide carried forward in the pulp from the blow pits. Certain tanks containing cooking acid could have off-gassing sulfur dioxide and these tank vents are also collected.

The collection system leads to a packed tower using an alkali scrubbing media, which removes the sulfur dioxide by chemical reaction.

2. Rationale for Selection of Performance Indicators

The selected performance indicator is the SO2 concentration in the stack gas, which is the regulated parameter in the permit.

3. Rationale for Selection of Indicator Ranges

The indicator range is the limit in the permit. — any excursion will be an exceedance

III. METHANOL (HAPS) EMISSIONS FROM DIGESTERS, WASHERS, EVAPORATORS & WASTEWATER TREATMENT

A. Emissions Unit Identification

Methanol is a byproduct of the acid sulfite pulping process. It is found in small concentrations in the spent pulping liquors and gas streams, which have contacted the spent liquors. Various unit operations are named in 40 CFR 63.444 because they contain spent pulping liquors and provide an opportunity for methanol emissions. These operations include the digesters, red stock washers, spent pulping liquor evaporators and effluent treatment system, and this rule regulates methanol emissions from these sources.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

The Fernandina Mill's Title V Permit [No. 089004-010-AC] under conditions 11 through 33 lists the MACT standard requirements for the mill. These are based on 40 CFR 63. Permit condition number 13 limits the methanol emissions from the sources listed in the regulation to 2.2 lb./ODUBT [pounds per oven dry unbleached short ton] (40CFR63.444(c)). Continuous monitoring systems are required for the emission sources.

C. Control Technology Description

The same system noted in Part II of this plan for sulfur dioxide emissions is used to capture gas streams containing methanol from the digester and red stock washer area. That system conveys the gas through a scrubbing tower containing a packed column for alkali for the removal of sulfur dioxide. The same tower has a 6 foot section of pall rings above the sulfur dioxide control section. This packing is for condensing methanol. If the gas is cooled below 150 degrees F and contacted with water, the methanol will condense, dissolve in the water, and be removed from the gas stream. The upper packing section of the tower uses 150 – 250 gpm of well water at approximately 80 degrees F to remove the methanol. There are four instruments continuously monitoring the operation of this condenser:

1. Gas temperature entering the scrubbing tower [vent gas scrubber].
2. Gas temperature leaving the condenser [top] section of the tower.
3. Water flow rate entering the condenser.

4. Temperature of the water entering the condenser.

It has been determined that the control indicator for this system should be the differential temperature across the tower [instrument 1 minus instrument 2 above]. This value is continuously provided to the operator on the distributed control system screen. The control graph located in the Methanol Continuing Compliance Methodology Report attachment was developed during the production of the pulp grade which provides the most methanol byproduct [most severe pulping conditions].

Steam is used to eject vent gases from the multiple effect pulping liquor evaporators in order for the optimum operating pressure to be maintained on each module. This steam with evaporator vent gases containing methanol is piped to the evaporator methanol condenser system. Unlike the digester area gas stream which has a temperature around 120 degrees F, the steam carrying the vent gases from the evaporators is at 220 degrees F. For this reason, a pre-condenser is provided to condense the steam and allow the main condenser to condense the methanol. The water used to condense the steam and methanol is from the biological effluent treatment system.

It has been determined that the control indicator for this system should be the gas temperature leaving the main condenser. This ensures the gas temperature is below the condensation point for methanol.

The effluent from the covered systems combines with other effluent from the mill, some of which contains methanol, and is treated in the biological treatment system [aerated stabilization basin]. The biological treatment removes the methanol from the effluent via bacterial digestion. The treatment system must operate effectively for the mill to meet its biochemical oxygen demand and total suspended solids permit limitations. This system is quite robust and there would need to be a significant and prolonged decrease in efficiency for the methanol not to be consumed. The microorganism rating and the amount of aeration horsepower being applied monitor the operation of the biological system. Both of these parameters are measured at least daily. The horsepower applied over a twenty-four hour period is the control indicator for this system.

D. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
Indicator	Vent gas scrubber methanol condenser differential temperature.	Exit gas temperature from the evaporator vent methanol condenser.	Horsepower applied during a 24-hour period.
Measurement Approach	Installation of continuous temperature instruments Rosemont 3144D1E684 and 3144D1NAC2x3. The differential temperature is provided to the operator through the distributive control system [DCS].	Installation of continuous temperature instruments Rosemont 3144D1NAB4.	Operating time for each aerator is continuously measured on the DCS.
Indicator Range	A differential temperature below 5 degrees F results in a notification of potential excursion. The sum of all three indicator values is required for the mill wide limit to be exceeded.	An exit gas temperature above 140 degrees F results in a notification of a potential excursion. The sum of all three indicator values is required for the mill wide limit to be exceeded.	A daily horsepower applied of less than 2,000 results in a notification of a potential excursion. The sum of all three indicator values is required for the mill wide limit to be exceeded.
Data Representa-tiveness	The temperature probes are installed directly in the gas streams. The computer [DCS] automatically calculates the differential between the temperatures.	The temperature probe is installed directly in the gas stream.	Amperage is used to provide daily horsepower.
Verification of Operational Status	The temperature probes are calibrated against recognized standards. Failure results in zero, 100 % of scale or no change in temperature readings. These are all obvious to the operator.	The temperature probe is calibrated against recognized standards. Failure results in zero, 100 % of scale or no change in temperature readings. These are all obvious to the operator.	The operator records the units operating each shift to verify the DCS totalization.

	Indicator No. 1	Indicator No. 2	Indicator No. 3
QA/QC Practices and Criteria	Temperature probe calibrations are made any time the probe is removed from the gas stream and at least as often as recommended by the manufacturer.	Temperature probe calibrations are made any time the probe is removed from the gas stream and at least as often as recommended by the manufacturer.	See Data Representativeness and Verification of Operational Status above.
Monitoring Frequency	The temperature instruments monitor continuously.	The temperature instruments monitor continuously.	The operating hours and amperage are monitored continuously.
Data Collection Procedures	The monitor is queried once each minute and this value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The monitor is queried once each minute and this value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The monitor is queried once each minute and this value is stored on a server with other process data. About once each month this data will be downloaded consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V recordkeeping requirements.	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V recordkeeping requirements.	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V recordkeeping requirements.

E. Justification

1. Indicator No. 1 - Vent gas scrubber methanol condenser differential temperature.

a. Background

The system for collecting the red stock washer, digester and acid plant gases is operated under a vacuum until all the gases are collected and blown into the vent gas scrubber via a large fan. The gases are evenly distributed through the alkali scrubbing section of the scrubber and up into the methanol condensing section. The condensing liquid is well water which has a relatively constant temperature of 80 degrees F. A distributor evenly applies the water over the packing of the condenser. The relatively cool water condenses and removes the methanol from the gas stream as it makes its one pass through the condenser. [Methanol is not effectively removed in the alkali SO_2 scrubber due to the high re-circulation rate required for the SO_2 reaction with the alkali and higher methanol concentration in the liquid.] The gas temperature entering the condenser can vary with the pulp production rate and other parameters, so the differential temperature of the gas across the condenser is the best indicator of its efficiency.

b. Rationale for Selection of Performance Indicators

To assure compliance, an adequate amount of water must be added to the condenser to cool the entering gas. The most direct means to verify the efficiency of the water addition system is to assure its ability to maintain a differential temperature across the condenser. If the gas temperature is maintained below condensation temperature for methanol [approximately 150 degrees F] and the concentration of methanol in the water is controlled at a low level [by flow rate and one-pass operation], the amount of methanol emitted from the condenser will be in control.

c. Rationale for Selection of Indicator Ranges

Nine methanol emissions tests made in April 2002 have been used to provide a formula for methanol emissions based on differential gas temperature as the Continuous Monitoring System [CMS]. The *Continuing Compliance Methodology* report attached provides the verification for this relationship. The data used from April was not collected on the facility's highest methanol-producing grade, but does show a consistent pattern of emissions versus differential gas temperature. When the initial compliance test data from June 2002 was available, the Cellunier production grade [most severe pulping conditions] provided a higher level of emissions at the same differential gas temperature. As shown in Table & Figure A of the *Continuing Compliance Methodology* report, an adjustment was made to the control curve to account for the Cellunier data. With no water flow through the methanol condenser the emissions of methanol are about 1.0 lb./ODUBT. The compliance test resulted in emissions of

0.34 lb./ODUBT at 18.5 degrees F gas temperature differential. Under normal operations the condenser emits about 15% [.34/2.2] of the total methanol emissions allowed for the entire mill. Since the water supplied to this packed column is fresh well water, the minimum water usage that controls the pulping and washing sector methanol emissions will be used.

2. Indicator No. 2 - Exit gas temperature from the evaporator vent methanol condenser.

a. Background

Steam with the evaporator vent gases containing methanol is piped to the methanol condenser system. Unlike the digester area gas stream, which has a temperature of about 120 degrees F, the steam carrying the vent gases from the evaporators is at 220 degrees F. For this reason, a pre-condenser is provided to condense the steam and allow the main condenser to condense the methanol. The water used to condense the steam and methanol is from the biological effluent treatment system after the bacteria have consumed the methanol. This water ranges from 60 degrees F in the winter to 95 degrees F in the summer. The condenser system is designed to provide low emissions of methanol. The water is applied in one pass so the concentration of methanol remains low in the liquid stream. The steam is condensed in the pre condenser and removed before the main condenser. This provides the best conditions for the main condenser to assure control of the exit gas temperature and the resultant condensation of methanol from the gas stream.

b. Rationale for Selection of Performance Indicators

To assure compliance, an adequate amount of water must be added to the condenser to cool the entering gas. Since the entering gas is mostly steam a differential temperature is not appropriate. The most direct means to verify the efficiency of the water addition system is to control the condenser exit gas temperature. If the gas temperature is maintained below condensation temperature for methanol [approximately 150 degrees F] and the concentration of methanol in the water is controlled at a low level [by flow rate and one-pass operation], the amount of methanol emitted from the condenser will be controlled.

c. Rationale for Selection of Indicator Ranges

The rationale for the 140 degrees F maximum exit gas temperature is based on an engineering review of the initial performance data which can be found in the *Continuing Compliance Methodology* report attached, and the very low level of emissions from the condenser during the initial performance test [less than 0.1 lb. Methanol/ODUBT on the "worst case pulp production grade" compared to the total limit of 2.2 lb. Methanol/ODUBT].

3. Indicator No. 3 Horsepower applied to the Biological Treatment System.

a. Background

The continuos monitoring system for biological treatment is the continuous monitoring of the aerator horsepower. The maximum treatment system applied horsepower is 3,650. When the horsepower is less than 2,000 for 24 hours, samples are collected at the end of the fifth mixing unit [mid-lagoon sample] and at the aeration basin discharge for methanol analyses. Compensating action will be taken in the mill as necessary to minimize organic loading to the treatment system during an occurrence of reduced aeration to the limit specified. The EPA Water 9 model provided 0.5 lb./ODUBT total emissions for effluent collection and treatment system during the "worst case conditions" of the initial compliance report.

b. Rationale for Selection of Performance Indicators

The biological treatment system has up to 10 days of retention. Most parameters, which affect the efficiency of the bacteria's consumption of pollutants including methanol, are measured on a daily basis. The most instantaneous parameter available to indicate the effectiveness of the biological system is the aeration horsepower applied to provide oxygen for the bacteria and other biota in the basin. This is measured by the operating hours of each of the forty aerators in the 34-acre treatment basin.

c. Rationale for Selection of Indicator Ranges

Thirty of the forty total aerators are located within the five mixing zones tested and modeled. The 2,000 horsepower daily average limit will assure adequate oxygen for the microorganisms.

4. Indicator Sum

As explained in the Continuing Compliance Methodology report attached, any one of the indicators can be exceeded without the total daily limit of 2.2 lb. Methanol/ODUBT being exceeded. Not only must the sum of the values be over the 2.2 lb./ODUBT, but the grade factor must be applied to compare the actual grade being produced to the worst case grade used in the initial performance test. Each indicator has instantaneous alarms which allow the operators to make repairs and possibly adjust the other indicator controls to minimize the chance of an overall exceedance of the limit.

IV. PARTICULATE EMISSIONS FROM NO. 1 BOILER

A. Emissions Unit Identification

This Emission Unit is a #6 oil fired water tube boiler with a maximum heat input rate of 185 mmBTU per hour. The emissions from this boiler pass through "A" venturi scrubber along with the emissions from No. 2 boiler. No. 1 Boiler is Emission Unit ID No. 001 and designated B1 in the Title V permit for the Fernandina Mill.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

In Air Operating Permit AO45-183504 particulate emissions were limited to 16.0 lb./hr. Subsequently Rayonier ask for an increase in operating rate from a heat input of 160 mmBTU per hour to 185 mmBTU/hr. However, it intended that this increase in heat rate not increase calculated emissions, thereby avoiding PSD permitting. Consequently the rate decreased from 0.1 lbs./mmBTU to 0.086 lbs./mmBTU, but the mass emission rate remained at 16.0 lbs./hr and 70 tons per year, as is contained in Title V permit Condition III(A)(4).

C. Control Technology Description

The emissions from this #6 oil fired boiler pass up through a standard venturi scrubber using pH controlled water as the scrubbing media. The pH control reduces corrosion of the venturi scrubber body. Particulate emissions control is set by the effectiveness of the venturi scrubber and the combustion efficiency of the boiler. Oxygen and carbon monoxide meters and other operational instruments monitor the boiler combustion efficiency. The venturi scrubber effectiveness is determined by the pressure drop across the venturi and the volume of liquid recycled through the venturi nozzles. However, scrubber effectiveness is not the only parameter that determines particulate emissions. To monitor the total particulate emissions an extractive beta gauge particulate monitor will be installed on the exit gas from the venturi scrubber, if it is determined that this type of monitor has been effective on the recovery boiler, where it is being tried first, and it is determined that it will work on this boiler emission point.

D. Monitoring Approach

	Indicator No. 1
Indicator	Particulate concentration via an extractive beta gauge particulate monitor.
Measurement Approach	The monitoring system isokinetically collects a sample of particulate on to a filter tape and compares the amount of radiation absorbed with the sample and without the sample on the tape. The instrument readout can be converted to particulate concentration. The concentration can then be calibrated against EPA Method 5 particulate tests.
Indicator Range	The indicator range will be selected based on EPA Method 5 testing shortly after the gauge is installed.
Data Representativeness	The system is designed to collect a representative sample, which will be repeatable as compared to Method 5. This will be verified and the sampling system will not be altered. The sample size on the tape can be controlled by the pressure drop across the tape or by timer.
Verification of operational Status	Each sample step provides a physical zero. The beta absorption using the C-14 source is virtually independent of the chemical composition, size or color of the collected particulate and shows no interference from water droplets or fogging in the stack. As a result there is no need for site-specific reference calibration.
QA/QC Practices and Criteria	As noted above there is a zero for each sample taken. In addition there is a daily automatic beta calibration. This checks the repeatability of the Beta gauge measurement component of the instrument system by performing a zero check, a span check and a filter tape positioning check. At the same time there is an automatic flow calibration. This checks repeatability of the flow meter components of the instrument system by routing the same flow through all of the flow meters at two separate flow set points to perform a low span and a high span check.
Monitoring Frequency	There will a particulate value provided at least every 15 minutes except for the daily 30-minute calibrations.
Data Collection Procedures	The monitor is queried once each minute and the latest value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements.

E. *Justification*

1. Background

Particulate emissions are controlled by the venturi scrubber [A scrubber] provided for this boiler and No. 2 power boiler. Established combustion control are provided for the boiler itself. To monitor the particulate emissions affected by both the boiler combustion controls and the venturi scrubber operation, an extractive beta gauge particulate monitor will be installed on the exit gas from the venturi scrubber. Technical specifications and information on the monitor is attached.

2. Rationale for Selection of Performance Indicators

The particulate monitor performance indicator is as close to measuring the particulate by the standard EPA Method 5 test as possible. The filter tape is made of glass fiber mesh and traps any dust particles larger than 0.3 microns.

3. Rationale for Selection of Indicator Ranges

The indicator range will be selected through calibration curves developed with EPA method 5 tests. The upper range value will be equivalent to the allowed permit emission rate. Alarms below the upper limit will be provided for hourly averages as well as instantaneous test results.

V. PARTICULATE EMISSIONS FROM NO. 2 BOILER

A. Emissions Unit Identification

This Emission Unit is a combination #6 oil and wood waste (bark) fired water tube boiler with a maximum heat input rate of 184 mmBTU per hour on oil and 218 mmBTU per hour on wood waste. The emissions from this boiler pass through "A" venturi scrubber along with the emissions from No. 1 boiler. No. 2 Boiler is Emission Unit ID No. 002 and designated B2 in the Title V permit for the Fernandina Mill.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

In Air Operating Permit AO45-183504 particulate emissions were limited to 50.6 lb. PM/hr. Subsequently Rayonier ask for an increase in operating rate from a heat input of 180 mmBTU per hour to 218 mmBTU per hour. However, it intended that this increase in heat rate not increase calculated emissions, thereby avoiding PSD permitting. Consequently the rate decreased from 0.280 lbs./mmBTU to 0.230 lbs./mmBTU for wood waste burning, but the mass emission rate remained at 50.6 lbs./hr and 212.5 tons per year, as is contained in Title V permit Condition III(B)(4). For oil the particulate matter emission rate limits are 15.2 lb./hr. and 63.9 tons per year.

C. Control Technology Description

The emissions from this boiler pass up through a standard venturi scrubber using pH-controlled water as the scrubbing media. The pH control reduces corrosion of the venturi scrubber body. Particulate emissions control is set by the effectiveness of the venturi scrubber and the combustion efficiency of the boiler. Oxygen and carbon monoxide meters and other operational instruments monitor the boiler combustion efficiency. The venturi scrubber effectiveness is determined by the pressure drop across the venturi and the volume of liquid recycled through the venturi nozzles. However, scrubber effectiveness is not the only parameter that determines particulate emissions. To monitor the total particulate emissions an extractive beta gauge particulate monitor will be installed on the exit gas from the venturi scrubber, if it is determined that this type of monitor has been effective on the recovery boiler, where it is being tried first, and it is determined that it will work on this boiler emission point.

D. Monitoring Approach

	Indicator No. 1
Indicator	Particulate concentration via an extractive beta gauge particulate monitor.
Measurement Approach	The monitoring system isokinetically collects a sample of particulate on to a filter tape and compares the amount of radiation absorbed with the sample and without the sample on the tape. The instrument readout can be converted to particulate concentration. The concentration can then be calibrated against EPA Method 5 particulate tests.
Indicator Range	The indicator range will be selected based on EPA Method 5 testing shortly after the gauge is installed.
Data Representativeness	The system is designed to collect a representative sample, which will be repeatable as compared to Method 5. This will be verified and the sampling system will not be altered. The sample size on the tape can be controlled by the pressure drop across the tape or by timer.
Verification of operational Status	Each sample step provides a physical zero. The beta absorption using the C-14 source is virtually independent of the chemical composition, size or color of the collected particulate and shows no interference from water droplets or fogging in the stack. As a result there is no need for site-specific reference calibration.
QA/QC Practices and Criteria	As noted above there is a zero for each sample taken. In addition there is a daily automatic beta calibration. This checks the repeatability of the Beta gauge measurement component of the instrument system by performing a zero check, a span check and a filter tape positioning check. At the same time there is an automatic flow calibration. This checks repeatability of the flow meter components of the instrument system by routing the same flow through all of the flow meters at two separate flow set points to perform a low span and a high span check.
Monitoring Frequency	There will be a particulate value provided at least every 15 minutes except for the daily 30-minute calibrations.
Data Collection Procedures	The monitor is queried once each minute and the latest value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages, and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements.

E. Justification

1. Background

Particulate emissions are controlled by the venturi scrubber [A scrubber] provided for this boiler and No. 1 power boiler. Established combustion controls are provided for the boiler itself. To monitor the particulate emissions affected by the boiler combustion controls and the venturi scrubber operation, an extractive beta gauge particulate monitor will be installed on the exit gas from the venturi scrubber. Technical specifications and information on the monitor is attached.

2. Rationale for Selection of Performance Indicators

The particulate monitor performance indicator is as close to measuring the particulate by the standard EPA Method 5 test as possible. The filter tape is made of glass fiber mesh and traps any dust particles larger than 0.3 microns.

3. Rationale for Selection of Indicator Ranges

The indicator range will be selected through calibration curves developed with EPA method 5 tests. The upper range value will be equivalent to the allowed permit emission rate. Alarms below the upper limit will be provided for hourly averages as well as instantaneous test results.

VI. PARTICULATE EMISSIONS FROM NO. 3 BOILER

A. Emissions Unit Identification

This Emission Unit is a combination #6 oil and wood waste (bark) fired water tube boiler with a maximum heat input rate of 207 mmBTU per hour on oil and 245 mmBTU per hour on wood waste. The emissions from this boiler pass through "B" venturi. No. 3 Boiler is Emission Unit ID No. 003 and designated B3 in the Title V permit for the Fernandina Mill.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

In Air Operating Permit AO45-183504 particulate emissions were limited to 50.6 lb. PM/hr. Subsequently Rayonier ask for an increase in operating rate from a heat input of 180 mmBTU per hour to 245 mmBTU per hour. However, it intended that this increase in heat rate not increase calculated emissions, thereby avoiding PSD permitting. Consequently the rate decreased from 0.280 lbs./mmBTU to 0.207 lbs./mmBTU for wood waste burning, but the mass emission rate remained at 50.6 lbs./hr and 212.6 tons per year, as is contained in Title V permit Condition III(C)(4). For oil the particulate matter emission rate limits are 16.7 lb./hr. and 70.1 tons per year.

C. Control Technology Description

The emissions from this boiler pass up through a standard venturi scrubber using pH-controlled water as the scrubbing media. The pH control reduces corrosion of the venturi scrubber body. Particulate emissions control is set by the effectiveness of the venturi scrubber and the combustion efficiency of the boiler. Oxygen and carbon monoxide meters and other operational instruments monitor the boiler combustion efficiency. The venturi scrubber effectiveness is determined by the pressure drop across the venturi and the volume of liquid recycled through the venturi nozzles.

To monitor both of these parameters, an extractive beta gauge particulate monitor will be installed on the exit gas from the venturi scrubber.

D. *Monitoring Approach*

	Indicator No. 1
Indicator	Particulate concentration via an extractive beta gauge particulate monitor.
Measurement Approach	The monitoring system isokinetically collects a sample of particulate on to a filter tape and compares the amount of radiation absorbed with the sample and without the sample on the tape. The instrument readout can be converted to particulate concentration. The concentration can then be calibrated against EPA Method 5 particulate tests.
Indicator Range	The indicator range will be selected based on EPA Method 5 testing shortly after the gauge is installed.
Data Representativeness	The system is designed to collect a representative sample, which will be repeatable as compared to Method 5. This will be verified and the sampling system will not be altered. The sample size on the tape can be controlled by the pressure drop across the tape or by timer.
Verification of operational Status	Each sample step provides a physical zero. The beta absorption using the C-14 source is virtually independent of the chemical composition, size or color of the collected particulate and shows no interference from water droplets or fogging in the stack. As a result there is no need for site-specific reference calibration.
QA/QC Practices and Criteria	As noted above there is a zero for each sample taken. In addition there is a daily automatic beta calibration. This checks the repeatability of the Beta gauge measurement component of the instrument system by performing a zero check, a span check and a filter tape positioning check. At the same time there is an automatic flow calibration. This checks repeatability of the flow meter components of the instrument system by routing the same flow through all of the flow meters at two separate flow set points to perform a low span and a high span check.
Monitoring Frequency	There will be a particulate value provided at least every 15 minutes except for the daily 30-minute calibrations.
Data Collection Procedures	The monitor is queried once each minute and the latest value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages, and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements.

E. Justification

1. Background

Particulate emissions are controlled by the venturi scrubber [B scrubber] provided for this boiler. Established combustion controls are provided for the boiler itself. To monitor the particulate emissions affected by the boiler combustion controls and the venturi scrubber operation, an extractive beta gauge particulate monitor will be installed on the exit gas from the venturi scrubber. Technical specifications and information on the monitor is attached.

2. Rationale for Selection of Performance Indicators

The particulate monitor performance indicator is as close to measuring the particulate by the standard EPA Method 5 test as possible. The filter tape is made of glass fiber mesh and traps any dust particles larger than 0.3 microns.

3. Rationale for Selection of Indicator Ranges

The indicator range will be selected through calibration curves developed with EPA method 5 tests. The upper range value will be equivalent to the allowed permit emission rate. Alarms below the upper limit will be provided for hourly averages as well as instantaneous test results.

VII. SULFUR DIOXIDE EMISSIONS FROM RECOVERY BOILER

A. Emissions Unit Identification

Emission Unit ID No. 6 in the Title V Permit designated RB is a sulfite recovery boiler. This boiler burns evaporated spent cooking liquor. Liquor used to remove unwanted portions of the wood chip contains sugars, tannins and combined lignins. Evaporation concentrates this organic portion of the liquor to the point it will sustain combustion when fired into the recovery boiler. Steam generated by the recovery boiler is used to generate electricity and for process purposes. The evaporated liquor contains sulfur compounds, which are converted to sulfur dioxide during combustion. This sulfur dioxide is captured in a scrubber using ammonium hydroxide scrubbing media producing ammonium bisulfite that is recycled as fresh cooking liquor.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

A Consent Order dated 09-20-90 resulting from OGC Case No. 90-1028 determined Reasonably Available Control Technology (RACT) for this source based on a State of Washington Rule. This determination was placed in Operating Permit 08900004-004-AO as condition 4 which was carried forward onto the Title V Permit No. 0890004-005-AV as Condition, Condition III(D)(2). This Emission Limitation is that the particulate matter is not to exceed 67.5 lb./hr.

C. Control Technology Description

Sulfur dioxide is controlled in an absorption tower in which contains there is a high re-circulation rate of ammonium bisulfite solution on internal trays in the column. Water is added to control the concentration of the bisulfite produced and ammonium hydroxide solution is added to control the pH of the solution. The sulfur dioxide meter [CEM] output sets the pH control point.

D. Monitoring Approach

	Indicator
Indicator	Sulfur Dioxide Concentration
Measurement Approach	Installation of a Siemens Model: Ultramat SE:SSN-EN-40, Continuous Emissions Monitor for sulfur dioxide
Indicator Range	The CEM is set to monitor on a range of 0 to 500 ppm. Any three hour average over 300 ppm represents a exceedance of the permit limit.
Data Representativeness	The measurement approach monitors the applicable requirement directly. The monitor sample point is located in the stack just prior to release to the atmosphere.
Verification of operational Status	This CEM has been installed since March 23, 1995. It has passed all required RATA tests and several inspections by Florida DEP personnel.
QA/QC Practices and Criteria	Sulfur dioxide span gas and zero are checked daily. A 2.4% error or less must be maintained for both checks or the instrument is replaced with one from stores.
Monitoring Frequency	The monitor is monitoring sulfur dioxide concentration continuously.
Data Collection Procedures	The monitor is queried once each minute and this value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V recordkeeping requirements.

E. Justification

1. Background

The recovery boiler burns 50%- 60% solids spent sulfite cooking liquor. This liquor contains approximately 6% sulfur on a dry solids basis. During the oxidation process of burning the liquor, the sulfur is converted to sulfur dioxide and removed with the combustion air. The flue gas from the boiler is routed through several cooling stages in the recovery boiler scrubber before it passes into the absorption section where the sulfur dioxide is absorbed with ammonium bisulfite. The absorption section controls the emissions of sulfur dioxide as measured by the Continuous Emissions Monitor.

2. Rationale for Selection of Performance Indicators

The selected performance indicator is the pollutant that has the permit limit.

3. Rationale for Selection of Indicator Ranges

The indicator range is the limit in the permit.

VIII. PARTICULATE EMISSIONS FROM RECOVERY BOILER

A. Emissions Unit Identification

Emission Unit ID No. 6 in the Title V Permit is a sulfite recovery boiler. This boiler burns evaporated spent cooking liquor. Liquor used to remove unwanted portions of the wood chip contains sugars, tannins and combined lignins. Evaporation concentrates this organic portion of the liquor to the point it will sustain combustion when fired into the recovery boiler. Steam generated by the recovery boiler is used to generate electricity and for process purposes. The evaporated liquor contains sulfur compounds, which are converted to sulfur dioxide during combustion. This sulfur dioxide is captured in a scrubber using ammonium hydroxide scrubbing media producing ammonium bisulfite that is recycled as fresh cooking liquor. Sulfur dioxide also reacts with ammonium hydroxide to produce ammonium sulfate and ammonium bisulfate. All of these ammonium compounds are dissolved in the carryover droplets from the scrubber. Reducing the emission of droplets reduces the particulate emissions. Capturing droplets carried over from the scrubber is accomplished by a Brinks mist eliminator, described below.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

The Reasonably Available Control Technology (RACT) for this source is dated 7/12/76 and is based on State of Washington Sulfite Pulp Mill Rules. The consent order history was through OGC Case No. 90-0332, DOAH Case 90-2153, Air Construction permit 0890004-001-AC, Air Operations permit 0890004-003-AO and Florida Rule 62-212.400(6). The particulate emission requirement is presently part of Operating Permit No. 0890004-005-AV, condition No. .4. This Emission Limitation is that the particualte emission not exceed 2.5 pounds per ton of air dried unbleached pulp.

C. Control Technology Description

The combustion process produces very small amount of soot from incomplete combustion in the boiler. Also, in the sulfur dioxide recovery scrubber following the recovery boiler, a small portion of the sulfur dioxide and ammonium hydroxide react to form ammonium sulfate instead of the preferred ammonium bisulfite. A portion of the ammonium sulfate formed is emitted by the boiler as a fume. A Brinks mist eliminator treats all the exhaust gases and captures the mist containing dissolved and suspended solids including the ammonium sulfate that form particulate after the emitted droplet evaporates in the atmosphere.

A Brinks mist eliminator is comprised of a series of tubes wrapped in fiberglass or polyester fiber bats, through which the exhaust gases from the scrubber must pass. The fibers filter out the droplets of scrubber media carried over and drain to a tank leading to evaporator feed so that another attempt can be made to recover the sulfur. This also reduces the ammonia sewered, which aids in reducing ammonia discharged to the Amelia River.

D. Monitoring Approach

	Indicator No. 1
Indicator	Particulate concentration via an extractive beta gauge particulate monitor.
Measurement Approach	The monitoring system isokinetically collects a sample of particulate on to a filter tape and compares the amount of radiation absorbed with the sample and without the sample on the tape. The instrument readout can be converted to particulate concentration. The concentration can then be calibrated against EPA Method 5 particulate tests.
Indicator Range	The indicator range will be selected based on EPA Method 5 testing shortly after the gauge is installed.
Data Representativeness	The system is designed to collect a representative sample, which will be repeatable as compared to Method 5. This will be verified and the sampling system will not be altered. The sample size on the tape can be controlled by the pressure drop across the tape or by timer.
Verification of operational Status	Each sample step provides a physical zero. The beta absorption using the C-14 source is virtually independent of the chemical composition, size or color of the collected particulate and shows no interference from water droplets or fogging in the stack. As a result there is no need for site-specific reference calibration.

	Indicator No. 1
QA/QC Practices and Criteria	As noted above there is a zero for each sample taken. In addition there is a daily automatic beta calibration. This checks the repeatability of the Beta gauge measurement component of the instrument system by performing a zero check, a span check and a filter tape positioning check. At the same time there is a automatic flow calibration. This checks repeatability of the flow meter components of the instrument system by routing the same flow through all of the flow meters at two separate flow set points to perform a low span and a high span check.
Monitoring Frequency	There will be a particulate value provided at least every 15 minutes except for the daily 30-minute calibrations.
Data Collection Procedures	The monitor is queried once each minute and the latest value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages, and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements.

E. Justification

1. Background

There are few methods available for continuously, or semi-continuously, determining mass particulate emissions. Historically, opacity or light transmissivity through the plume has been used as a surrogate. For certain types of combustion the blackness of the plume was used as an indication of soot and therefore particulate emissions. Sources employing wet scrubbing technologies can sometimes relate liquid media flow and pressure drop to mass particulate emission. Liquid scrubbers emit saturated plumes and the condensing water droplets interfere with the opacity measurements.

The sulfite recovery boiler at the Fernandina Mill does not employ a scrubber to remove particulate, but does have a wet scrubber prior to emission to the atmosphere, thus it has a wet plume. Furthermore, the predominant specie of particulate is ammonium sulfate. Because ammonium sulfate particle has such a high reflectance, opacity type surrogates do not work on this type of plume.

Efforts have been made to find a surrogate parameter without success. These efforts involved trying to find other equipment operating parameters that could be measured and related to particulate emission compliance using statistics and neural networks. All these efforts have failed.

A method was found that may work. This method is based on an older method for ambient air pollution measurements called tape sampling. A small radioactive beta source is used. A baseline measurement of beta radiation passing through a clean portion of a fiberglass tape. The tape is moved to a position where a gas stream sample from the stack gases is passed through the filter tape. This sample is taken isokenetically from the stack gases to avoid biasing the size particulate sampled. The tape filters out particles down to about 0.3 micron in size. After filtering out the particulate in the gas stream the beta ray attenuation across the sampled area on the tape is measured again. The difference is used to relate to the quantity of particulate in the gas stream sampled.

2. Rationale for Selection of Performance Indicators

The performance indicator is the attenuation of beta radiation. Beta gages have been used for a long time to measure thickness of various thin materials.

3. Rationale for Selection of Indicator Ranges

The ranges will be determined after experience is gained with this new type of monitor. The monitor will be installed and data will be available to establish ranges prior to the expiration of the existing Fernandina Mill Title V permit.

Rayonier

Fernandina Mill

Continuing Compliance Methodology

40 CFR Part 63.9(h)(i)(C)

Permit Number 0890004-010-AC

August 16, 2002

INTRODUCTION

Rayonier's Fernandina Mill Title V permit [No. 089004-010-AC] under specific conditions 11 through 33 lists the MACT standard requirements for the mill. In conjunction with the Initial Performance Test [specific condition 23] provided in this package, this Continuing Compliance Methodology is presented to address specific conditions 15 – 17 and 19 – 20 concerning the continuous monitoring system. Another report will be provided before October 15, 2002, presenting enclosure and closed vent system initial leak detection survey and routine inspection program.

PROCESS DESCRIPTION

Methanol emissions are controlled through three systems:

1. The digester and washer emissions methanol condenser.
2. The evaporator vents methanol condenser.
3. The effluent biological treatment system.

These systems are described in some detail in the Initial Performance Test report. Diagrams of the pulping and the evaporator systems are provided [Figures 1 & 2] attached. It is important to note that the inlet gas streams to the two condensers are quite different and require different control parameters.

CONTROL PARAMETER DESCRIPTION

A. __The digester and washer emissions methanol condenser system.__

The vent gas scrubber which collects and scrubs all of the gases from the digester, acid plant and spent sulfite liquor washer area has two packed sections. The lower section is designed for sulfur dioxide [SO_2] emissions control and is operated based on pH control and an SO_2 continuous emissions monitor [CEM]. This section is operated at system temperatures and is designed with a large circulation flow. It therefore is not an efficient condenser of methanol. The upper packed section of the vent gas scrubber is designed to use "cool" water to condense methanol from the gas stream. This is not an absorption-reaction process like the SO_2 scrubber section, but a cooling operation that brings the temperature of the methanol in the gas down to a point that it condenses into a liquid. There are four instruments continuously monitoring the operation of the condenser:

1. Gas temperature entering the vent gas scrubber.

2. Gas temperature leaving the condenser.
3. Water flow rate entering.
4. Temperature of the water entering.

From tests made on this system it has been determined that the difference between the entering and leaving gas temperature clearly correlates to the methanol emissions. The basis for this determination will be provided later in this report.

B The evaporator vents methanol condenser

Steam is used to eject vent gases from the evaporators in order for the optimum operating pressure to be maintained on each module. This steam with the evaporator vent gases containing methanol is piped to the methanol condenser system. Unlike the digester area gas stream which has a temperature of about 120 degrees F, the steam carrying the vent gases from the evaporators is at 220 degrees F. For this reason, a pre-condenser is provided to condense the steam and allow the main condenser to condense the methanol. The water used to condense the steam and methanol is from the biological effluent treatment system. There are five instruments continuously monitoring the operations of this system:

1. Gas temperature leaving the main condenser
2. Water temperature leaving the pre-condenser
3. Water temperature leaving the main condenser
4. Water flow rate entering the pre-condenser.
5. Water flow rate entering the main condenser.

Based on testing and an engineering study it has been determined that methanol control is based on the gas temperature leaving the main condenser.

C. The effluent biological treatment system

The effluent from the covered systems combines with other effluent from the mill, some of which contains methanol, and is treated in a primary clarifier and the biological treatment system [aerated stabilization basin]. The biological treatment removes the methanol from the effluent via bacterial digestion. The treatment system must operate effectively for the mill to meet its biochemical oxygen demand and total suspended solids permit limitations. This system is quite robust and there would need to be a significant and prolonged decrease in efficiency for the methanol not to be consumed. The operation of the biological system is monitored by the microorganism rating and the amount of aeration horse power being applied. Both of these parameters are measured at least daily, and both are being used to determine if methanol consumption is adequate.

CONTINUOUS MONITORING SYSTEMS

A. The digester and washer emissions methanol condenser system.

Nine methanol emissions tests made in April have been used to provide a formula for methanol emissions based on differential gas temperature as the Continuous Monitoring System [CMS]. The spreadsheet providing the data and calculations along with the control graphs are Table A and Figure A attached. The data used from April was not on our highest methanol-producing grade, but does show a consistent pattern of emissions versus differential gas temperature. When the initial compliance test data from June was available, the Cellunier production provided a higher level of emissions at the same differential gas temperature. As shown in Table & Figure A, an adjustment has been made to the curve to account for the Cellunier data. Attached is the Source Testing and Consulting Services, Inc. (STACS) report covering the April tests. Our daily control report is also attached to demonstrate the daily operator monitoring responsibilities.

The data have shown that with no water flow through the methanol condenser the emissions of methanol are about 1.0 lb/ODUBT [see Table B]. The compliance test provided emissions at 0.34 lb/ODUBT at 18.5 deg.F gas temperature differential. Under normal operations the condenser provides about 15% [.34/2.2] of the total methanol emissions allowed for the entire mill. Since the water supplied to this packed column is fresh well water, the minimum water usage that controls the mill wide methanol emissions will be used.

B. The evaporator vents methanol condenser

Attached in Appendix I is a report by Harris Group Inc. thoroughly reviewing the test data for the evaporator vent condenser. The conclusion of the report is that the exiting gas temperature is an excellent parameter for controlling methanol and should be used as the CMS for this condenser application. The report states that exit gas temperatures under the condensing temperature of methanol will result in low emissions of methanol. If the gas temperature leaving the condenser is below 140 degrees F it indicates that enough water has been added to the condenser to adequately contact the gas stream, cool it and condense the methanol. Based on these results the control limits shown in the daily report for the evaporator methanol condenser (attached) are in effect. It was determined that when the condenser system was bypassed the emissions increased to 1.3 lb/ODUBT or 60 % of the overall mill emissions limit of 2.2 lb/ODUBT. When the condenser system is in operation and under the maximum exit gas temperature control limit [140 deg.F], the emissions are under 0.1 lb/ODUBT or 5% of the overall mill emission limit.

C. <u>The effluent biological treatment system</u>

The CMS for the biological treatment system is the continuous monitoring of the aerator horsepower. The maximum treatment system applied horsepower is 3,650. When the horse power is less than 2,000 for 24 hours, samples will be collected at the end of the fifth mixing unit [mid-lagoon sample] and at the aeration basin discharge for methanol analyses. Compensating action will be taken in the mill as necessary to minimize organic loading to the treatment system during an occurrence of reduced aeration to the limit specified. The EPA Water 9 model provided 0.5 lb/ODUBT total emissions for effluent collection and treatment system during the "worst case conditions" of the initial compliance report.

CONTINUOUS MONITORING SYSTEM SUMMARY

Emission Source	Covered Systems	Continuous Monitoring System	CMS Control Limit	Other CMS
Vent Gas Scrubber Stack	Digester, Acid Plant and Red Stock Washers	Condenser Differential Gas Temperature	5 Deg. F	- Gas temperature entering the vent gas scrubber. - Gas temperature leaving the condenser. - Water flow rate entering. - Temperature of the water entering.
Recovery Boiler Scrubber Stack	Evaporator Vents	Condenser Exit Gas Temperature	140 Deg. F	- Gas temperature leaving the main condenser - Water temperature leaving the pre-condenser - Water temperature leaving the main condenser - Water flow rate entering the pre-condenser. - Water flow rate entering the main condenser.
Effluent Collection and Treatment System	Pump Station No. 1 & Bar Screen, No. 3 Pump Station, Primary & Secondary Effluent Treatment System	Aerator horsepower	2000 horse-power	Daily Biota Rating.

EMISSIONS SUMMARY

Emission Source	Normal Control Emissions lb MeOH /ODUBT	Percent of Emission Limit of 2.2 lb MeOH / ODUBT	Control System Bypass Emissions lb MeOH / ODUBT	Percent of Emission Limit of 2.2 lb MeOH / ODUBT
VGS Stack	0.34	15%	0.95	43%
Recovery Boiler Stack	0.05	2%	1.31	60%
Effluent Collection and Treatment System	0.50	23%	0.50	23%
Total	0.89	40%	2.76	126%

EMISSIONS CONTROL STRATEGY

From the summary above it can be seen that the systems in place are quite robust. All results presented are for the worst case pulp grade for emissions. Either condenser system can be completely out of service and the emissions limit can be met. Our intention is to operate each system efficiently and with minimum practical water usage.

ACTUAL EMISSIONS COMPARED TO "WORSE CASE"

As noted above all data presented thus far is based on the worse case production grade, Cellunier [grade no. 19]. The Methanol Emissions Event Log [Table C] provides a calculation of actual and "worse case" total emissions for each day when there was a system upset. The actual emissions are calculated by summing the worse case emissions from each of the three emissions sources and then applying the grade factor. The grade factors are provided in Table D. These factors are derived by ratio of the intrinsic viscosity of the digester pulp from each grade compared to that of Cellunier. The intrinsic viscosity is the analytic value, which represents the chain length of the cellulose molecules in the pulp. It is directly related to the severity of the cooking process. Table E is a comparison of the actual emissions testing and CMS equations based on that testing. It illustrates that the grade factor is conservative and estimates a somewhat higher emission level than the actual testing provided.

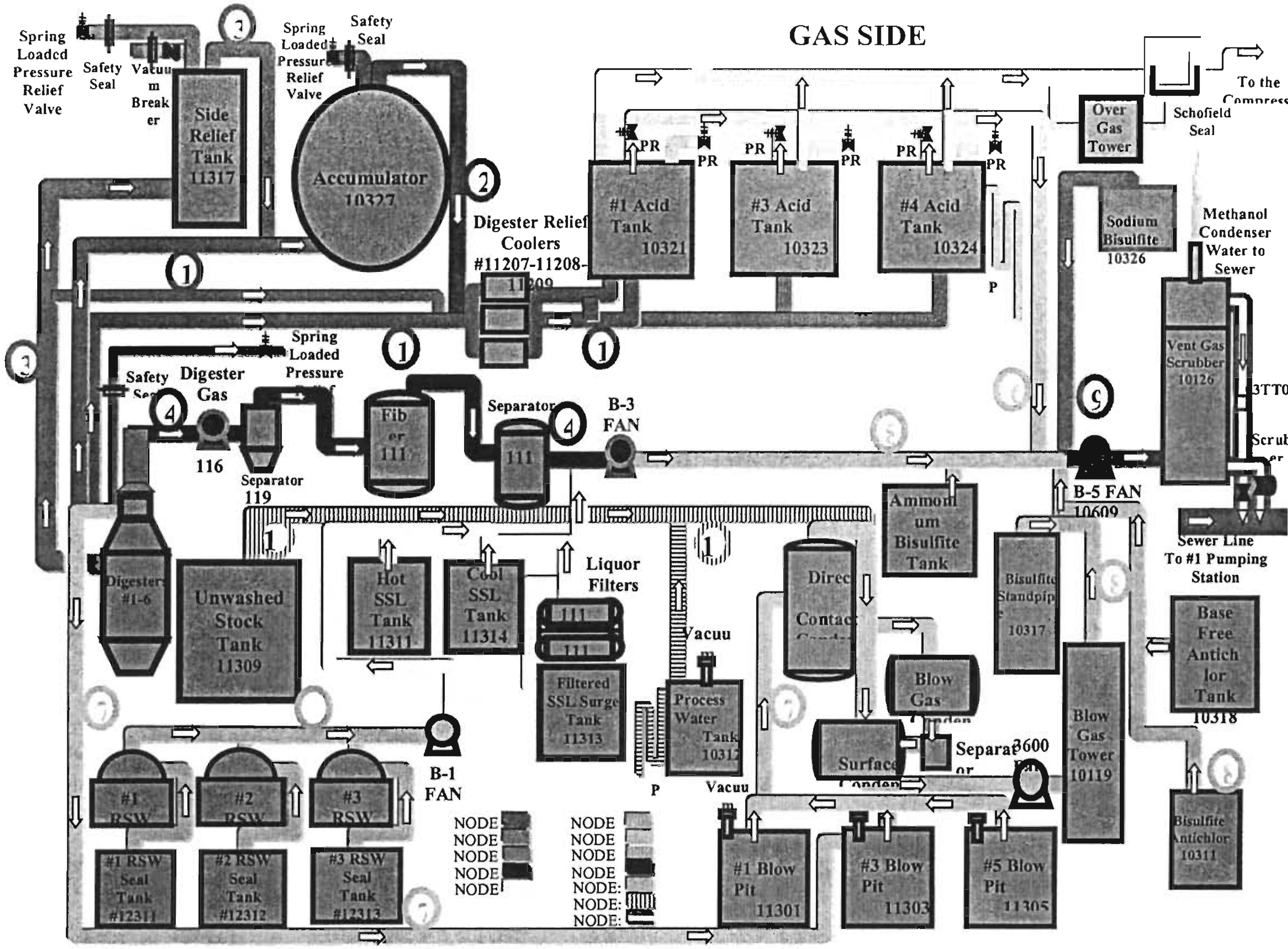

Figure 1 Flow Diagram of Pulping and Washing System Emissions

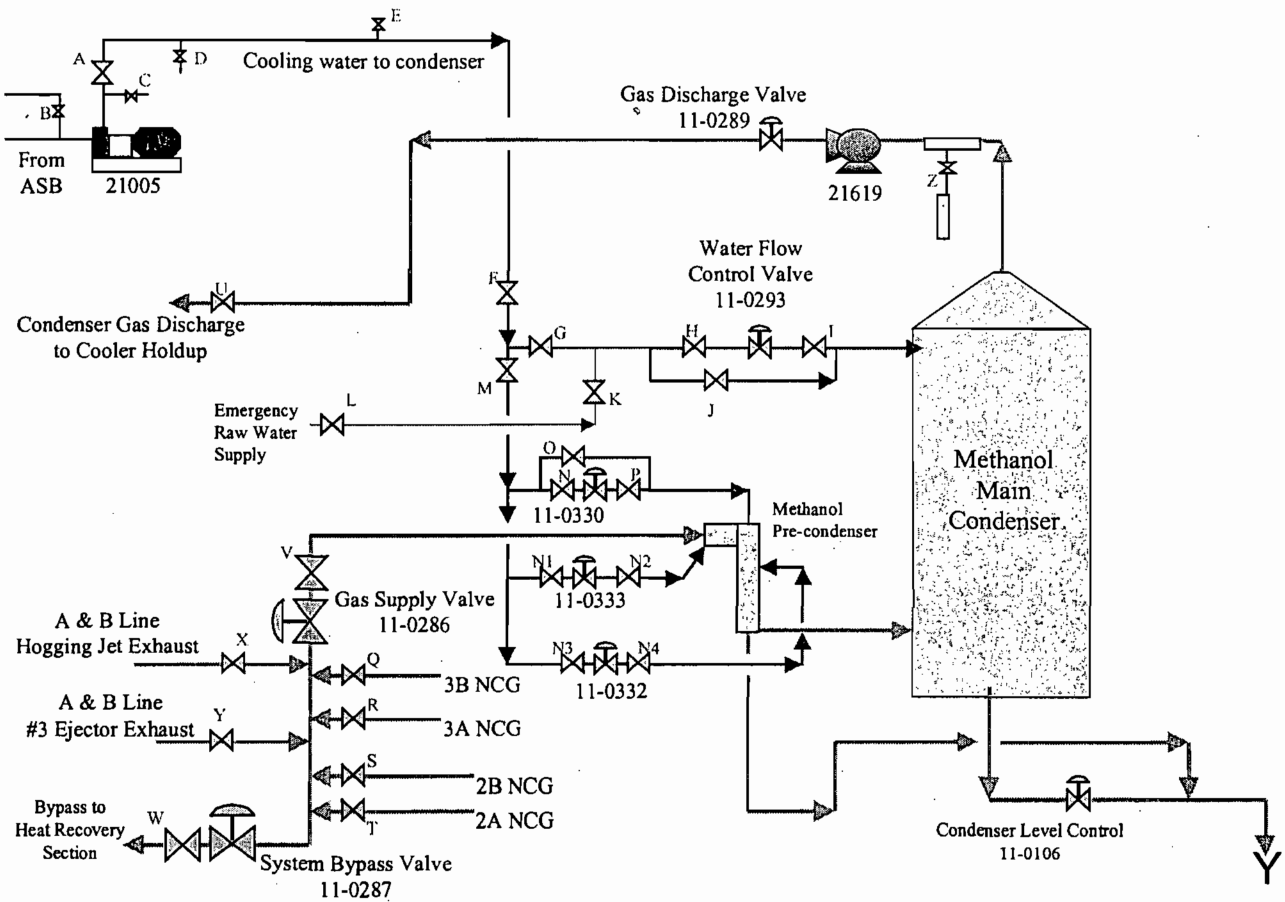

Figure 2 Flow Diagram of Evaporators / Non-Condensable Gases Collection System

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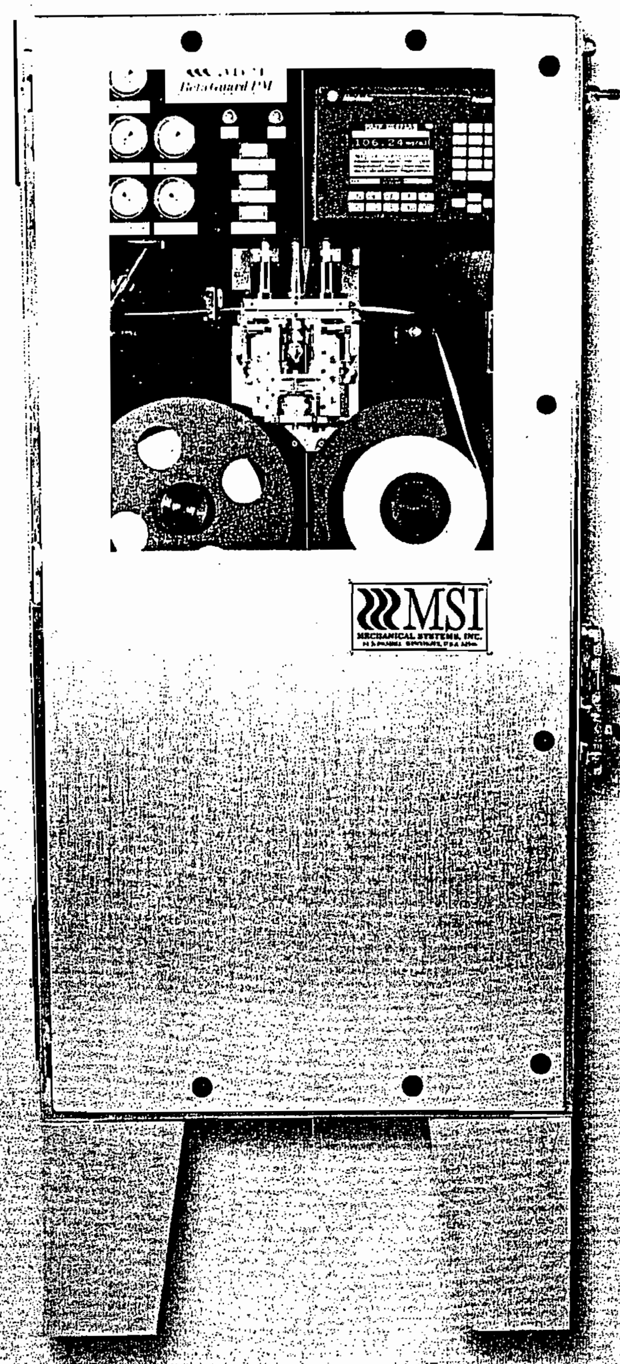
MSI

BetaGuard PM

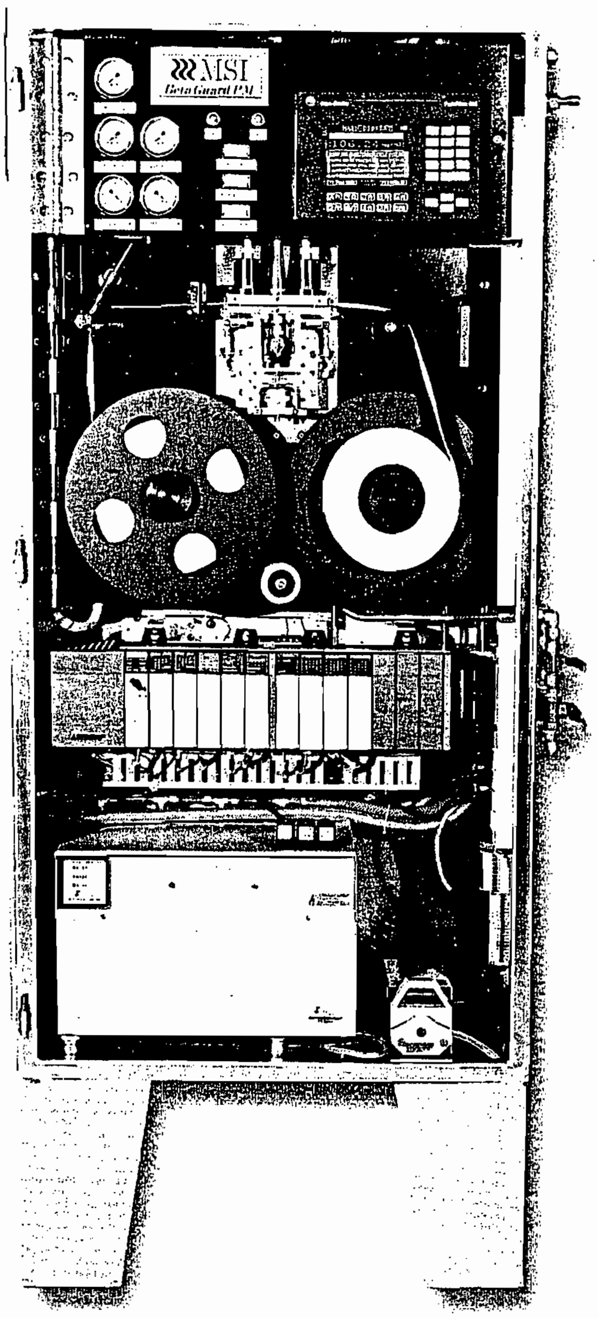


MSI BetaGuard PM Continuous Source Particulate Monitor

MADE IN U. S. A.

Description

The MSI BetaGuard PM beta gauge measures particulate emissions from all types of sources under all conditions. Stacks with changing particulate conditions (size, shape, color, density, composition) or varying operating parameters (flow rate, moisture concentration, temperature, pressure) are accurately measured. Wet basis, dry basis and process rate measurements are now available from a single instrument!



MSI BetaGuard PM

Applications

- Coal Fired Power Plants
- Cement Kilns
- Petroleum Refineries
- Hazardous Waste Incinerators
- Boiler Industrial Furnaces
- Municipal Waste Combustors

Capabilities

- Dual Beta Sensor Design
- Built-In Redundancy
- Dry Basis Measurement
- Wet Basis Measurement
- Process Rate Measurement
- Isokinetic Flow Sampling
- Isothermal Sampling

Certifications

- Method 5 Equivalence
- Method 5i Equivalence
- Method 17 Equivalence

Calibrations

- Seven Point Beta Characterization
- Seven Point Flow Characterization
- Automatic Daily Beta Calibration
- Automatic Daily Flow Calibration
- Quarterly Beta Audit
- Quarterly Flow Audit

Features

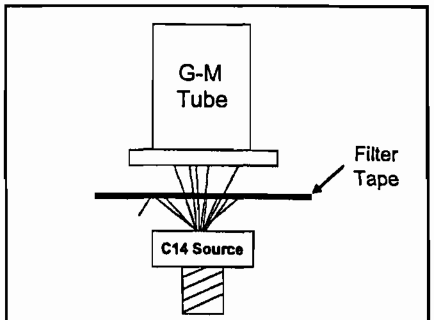
- NEMA 4X Construction
- Allen Bradley SLC 500 Control
- Heated Dilution Air
- Simplified Filter Tape Replacement
- Complete Alarms
- Complete Diagnostics
- Built-In Lightning Surge Protection
- 115 VAC Operation
- Manufactured in the U.S.A.

Options

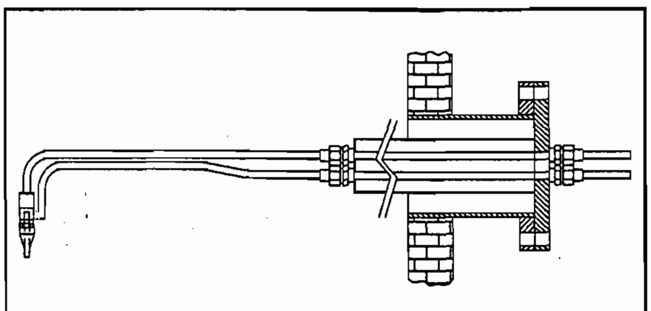
- Remote Display and I/O to 10,000 Feet
- Outdoor Walk-In Enclosure
- Heavy Metals Monitoring Package
- Continuous Moisture Measurement

Principle of Operation

A low energy Carbon-14 source furnishes a constant supply of beta electrons which are detected by a Geiger-Mueller tube. A filter tape is interposed between the source and detector and the mass of the initial clean filter spot is recorded by measuring the counts of beta electrons reaching the G-M tube. This clean spot is then moved under a collection apparatus for sample extraction from the stack. A sample of stack gas is drawn through and deposits particulate on the filter tape. All particles above 0.1 microns (μ) are collected. Once a sufficient amount of sample is collected on the filter tape, the filter tape is moved back under the beta detector and remeasured. The difference in beta emission counts measured from the original clear spot to the collected sample is directly proportional to the mass on the tape.



Beta Transmission Sensor Principle


BetaGuard PM Dilution Probe

The MSI BetaGuard PM extracts the sample isokinetically from the stack using a dilution probe to suppress moisture and increase sample transport velocity. During the time the mass is building up on the tape, the BetaGuard PM is measuring the sample volume extracted from the stack to produce that mass. Combining the collected mass with the drawn sample volume provides a measure of mass concentration.

The MSI BetaGuard PM measures the flow both wet and dry to provide mass concentration readings on both a wet and a dry basis.

BetaGuard PM Measures Accurately Under All Conditions Regardless Of:

Emission Control Technology

- Dry Electrostatic Precipitator
- Wet Electrostatic Precipitator
- Dry Scrubber
- Wet Scrubber
- Fabric Filter/Baghouse
- Quench Tower

Changes in Particle Properties

- Size
- Shape
- Color
- Chemical Composition
- Density

Changes in Stack Gas

- Velocity
- Water Vapor Content (Humidity)
- Pressure
- Temperature

Stack/Duct Construction

- Size
- Shape
- Internal Lining
- Materials of Construction

Equipment Changes Over Time

- Ball Mill/Pulverizer Wear
- ESP Degradation
- Fabric Filter Deterioration
- SO_3 Injection Rate
- Carbon Injection Rate

BetaGuard PM General Specifications

Particulate Conc. Range (Selectable):	0 - 1000 mg/m^3 0 - 0.5 grains/ft^3
Diluted Sample Flow Range:	0 - 3.5 m^3/hr, 0 - 60 1/min 0 - 120 ft^3/hr
Minimum Batch Sampling Time:	140 seconds
Minimum Measurement Update Time:	6 minutes
Measurement Sources (2)	
Isotope:	Carbon-14
Activity:	<12 µCi
Half Life:	5700 years
Licensing:	None Required - Exempt
Measurement Detectors (2):	Geiger-Mueller (G-M) Tube
Filter Medium:	Glass Fiber, Low Heavy Metals
Digital I/O:	16 in / 16 out
Analog I/O:	10 in / 2 out
Warm-up Time:	30 minutes
Power Requirements	
Main Instrument:	115 Vac, 15 A max
Heated Sample Line:	115 Vac, 10 A max
Dilution Air Heater:	115 Vac, 6 A
Instrument Air Requirements:	80 psig, 6 scfm min
Dimensions:	72"h x 30"w x 12"d
Weight:	275 pounds
Environmental Rating:	NEMA 4X IP66
Operating Temperature:	50° - 120°F / 10° - 50°C
Storage Temperature:	-20° - 135°F / -30° - 60°C

MSI
MECHANICAL SYSTEMS, INC.
480 Progress Way
Sun Prairie, Wisconsin 53590
Telephone 608-825-2055
Facsimile 608-825-2295
www.msicems.com

The MSI BetaGuard® PM

Principles of Operation of a Beta Gauge Particulate Monitor

The BetaGuard PM is an instrument for measuring the concentration of particulate matter in combustion exhaust. It operates by drawing a sample of exhaust from a probe through a piece of filter tape. The filter tape is made of a glass fiber mesh, similar to fiberglass, and traps any dust particles larger than 0.3 microns. A mass measuring sensor called a Beta Gauge measures the mass of the filter tape first when the filter is clean, and again when the filter is loaded with particles. The instrument subtracts the filter mass before and after loading to calculate the mass of the particles in milligrams (mg). The instrument also measures the flow of the stack sample gas in cubic meters (m^3) used to extract the sample, and calculates the particulate concentration by dividing the mass by the volume in units of mg per m^3. This process emulates USEPA Methods 5, 5i and 17.

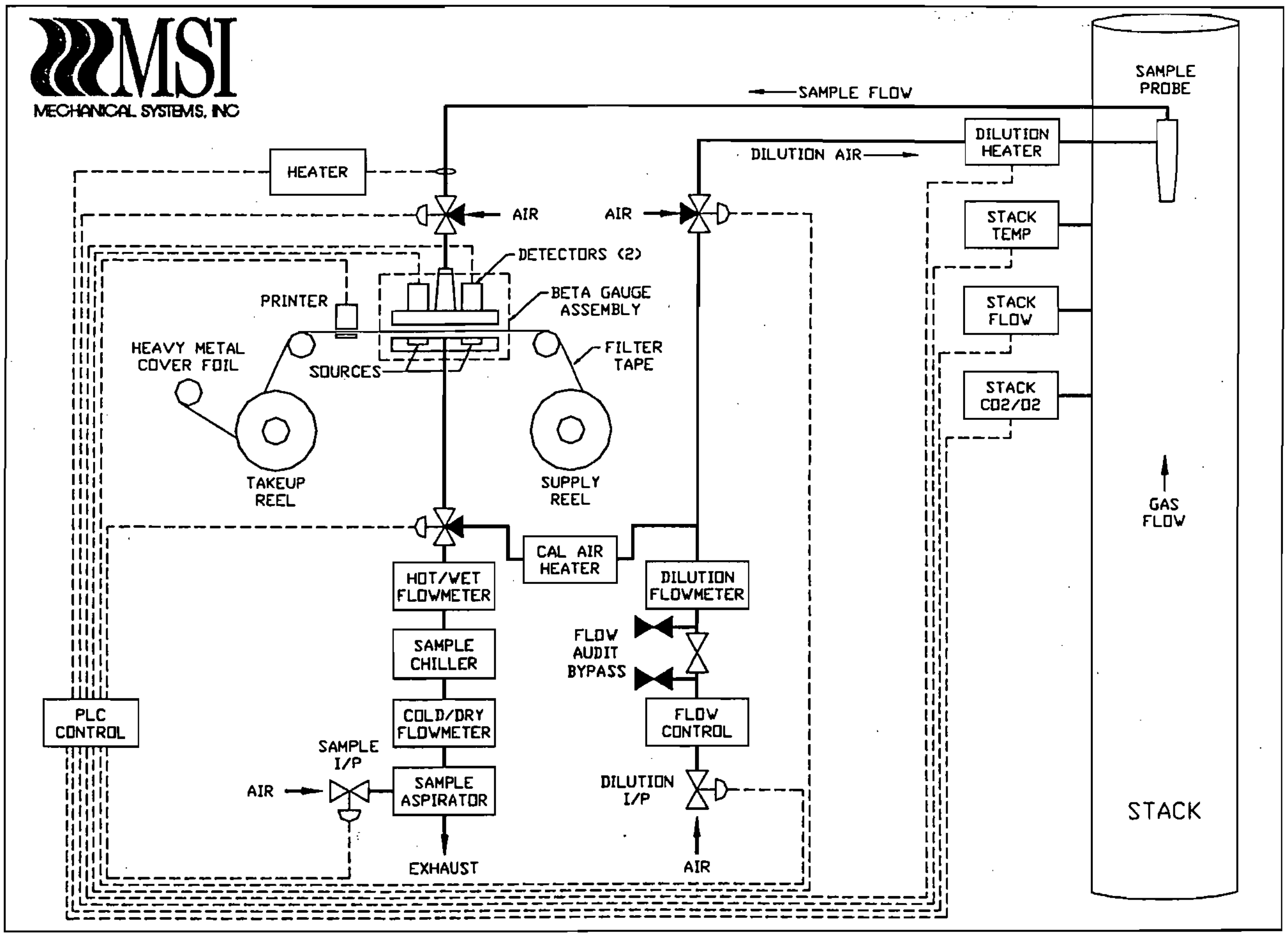


Figure 1.5: MSI BetaGuard PM Schematic Diagram

Beta Gauge

The Beta Gauge is a transmission-style sensor that transmits Beta particles through the filter tape and measures the Beta particles that get through the filter on the other side (see Figure 1.6).

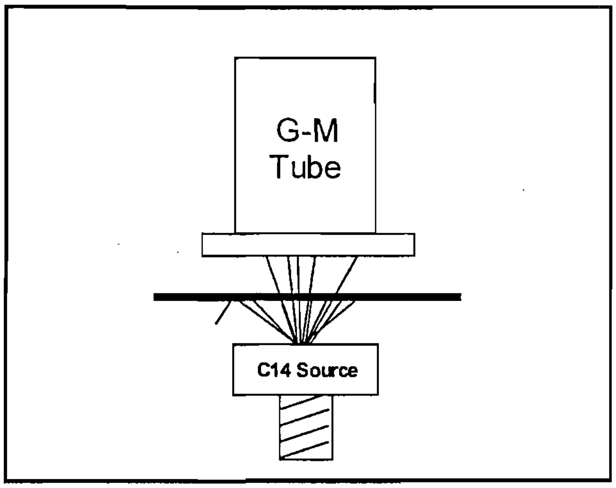


Figure 1.6: Beta Gauge Source and Detector

Beta particles are high energy electrons emitted from a radioactive isotope as it decays. They are not themselves radioactive, nor do they make anything they contact radioactive. The radioactive material, in this case Carbon-14 (C-14), is sealed in the source capsule and is not allowed to escape. The Beta particles are continuously being emitted through the source capsule window. Some are absorbed by the window itself, many are absorbed by the filter tape and the particulate particles, some are absorbed in the G-M Tube detector window and the rest are detected by the G-M Tube detector.

The Beta particles being emitted from the C-14 Source have an energy of 156 kev (kilo-electron volts), which is somewhat higher than the electrons striking the phosphor coating on the inside of a home television tube. The C-14 Beta particles can only travel about 10 inches in air before they are absorbed, and they are easily blocked by clothing and skin. The amount of radioactivity in the BetaGuard PM is similar to that in a household smoke detector, so no special labeling or licensing is required. It is recommended, however, that whenever any work is performed on the sources, filter tape holder or detectors, safety glasses must be worn.

The G-M Tube detector is a device that counts ionizing radiation (Alpha, Beta, Gamma) and is therefore called an ionization detector. A G-M, or Geiger-Mueller, Tube is a metal canister of gas with a thin window on one end and an electrode in the inside center (see Figure 1.7). A Beta particle that passes through the filter tape and the thin G-M Tube window will collide with the atoms of gas in the G-M Tube. Since a Beta particle is really a high energy electron, it has mass and an electrical charge and it is moving quickly. As the Beta particle collides with a gas atom, it gives some of its energy to an outer shell electron of that gas atom. If the outer shell electron now has enough energy to overcome the binding energy of the nucleus, it can escape from its atom. This results in an extra free electron in the G-M tube and an atom that has one fewer electron than it needs to be electrically neutral. This electron-deficient atom has an overall positive charge and is called an ion. This is the process of ionization and one Beta particle can ionize many hundreds of gas atoms. The gas in the G-M Tube is selected for its density and the ease with which its outer shell electrons can be stripped by the incoming Beta particle (ionization potential).

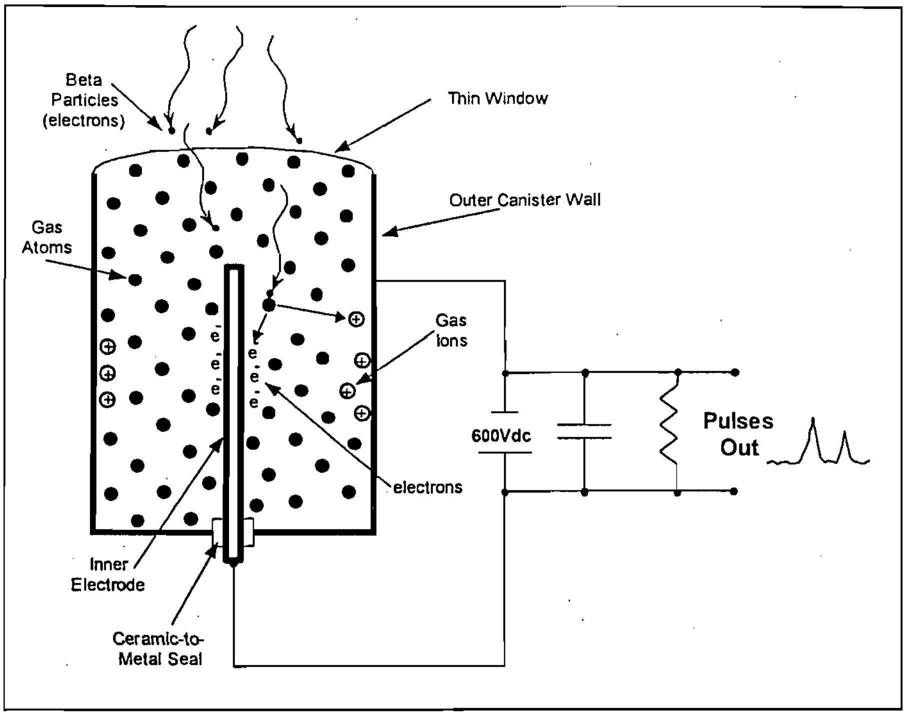


Figure 1.7: Geiger-Mueller Tube Schematic

An electrode is sealed into the G-M tube through the bottom but is electrically isolated from the outer canister by a ceramic-to-metal seal. A high voltage is applied across the inner electrode and the outer canister that creates a large radial electric field inside the G-M Tube. Since the free electrons caused by the Beta ionization have a negative charge, they are attracted to the high potential inner electrode and the positively charged ions are attracted to the low potential canister wall. Since the electric field is so high, these charged particles are accelerated fast enough to cause ionization in more gas atoms. This process known as secondary ionization results in a rush of flowing charge to the inner electrode and the outer canister wall. This rapid charged particle flow is seen as a burst of current on the conductors attached to the electrode and canister. A resistor placed across these conductors converts the current burst to a voltage pulse for each Beta particle entering the G-M tube. Counting these pulses determines how many Beta particles are passing through either the clean filter tape or the filter tape with particulate. The ratio between the two pulse counts determines the net mass on the filter tape.

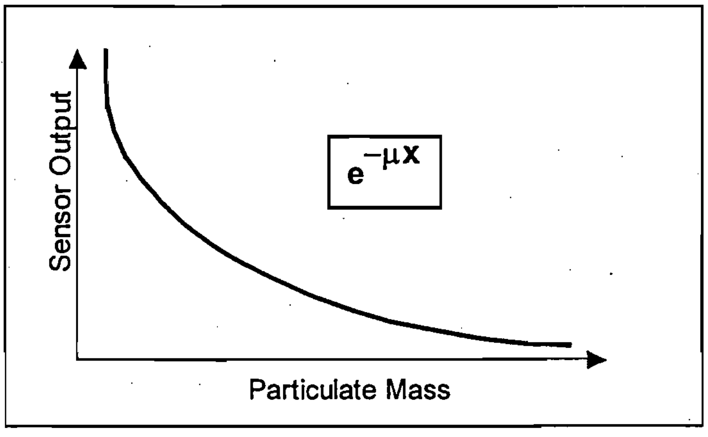


Figure 1.8: Inverse Exponential Beta Transmission Sensor Response

The response of the Beta transmission sensor to particulate mass is similar to that of an optical opacity sensor that shines light through the stack and measures its intensity after it has traveled through the stack gas where it has been partially scattered and absorbed. The sensor output is inversely proportional to the amount of mass between the source and detector and exhibits an exponential dependence as shown in Figure 1.8

Sample Flow

The stack gas is isokinetically drawn through a nozzle attached to a stainless steel ½" (12mm) diameter tube. The nozzle points against the direction of stack gas flow and has a well defined circular opening, typically 5 or 6mm diameter. A dilution tube, also ½" diameter stainless steel, connects to a mixing chamber just behind the rear of the nozzle and adds dry filtered ambient air in the dilution ratio set by the BetaGuard PM (typically between 1:1 and 10:1). The dilution flow is measured by a mass flowmeter in the instrument.

The total diluted sample is drawn through a heated ½" stainless steel sample line and passed through the filter tape where any particulates (dust) in the sample larger than 0.3 microns (0.01 thousandths of an inch diameter) are accumulated.

The filtered diluted sample gas then passes through a flowmeter that measures the diluted sample gas flow in the hot, wet state. If a dry basis particulate concentration measurement is needed, the diluted sample gas flows through a chiller where the water is removed, and then through another mass flowmeter to calculate the dry total flow. The sample gas is finally vented back into the stack or into open air.

Sample Heater

The sample line is actively heated by an electrical resistance heater that is controlled by the BetaGuard PM. The dilution line is optionally heated at the Probe flange by an electrical resistance in-line air heater. Additional closed loop controlled heaters are mounted in the filter holder and optionally in the cabinet sample gas circuit to insure that the sample remains hot. The BetaGuard PM can also be set to continuously vary the sample temperature to track the stack gas temperature if Isothermal Sampling mode is selected.

Particulate Measurement Cycle

The diluted stack gas sample is brought to the filter tape through a conical pipe that is mounted to the top half of the filter holder. The top and bottom half of the filter holder fit together tongue-in-groove style to trap the filter tape and seal around the conical pipe. A stainless steel tube is attached to the bottom half of the filter holder below the filter tape opposite the conical pipe. This assembly insures that the filter tape remains stationary while the sample gas is passed through it without allowing any of the sample gas to escape.

The sample gas is passed through the filter tape long enough to deposit a sufficient amount of mass for the BetaGuard PM measurement, typically 4 – 28 mg. The sample flow cycle is usually 7-15 minutes depending on stack particulate concentration. The filter tape is moved back and forth from under the sample gas flow to between the Beta gauge source and detector by a stepper motor and a friction wheel drive. Each time the filter tape is moved, a solenoid separates the two halves of the filter holder. When the filter tape stops moving, the filter holder halves are pressed tightly together by compression springs.

A typical measurement cycle is as follows:

Step 1 The stepper motor advances the filter tape to a clean section within the filter holder (about 92mm [3.6"])

Step 2 No sample is passed through the filter tape while the left-hand Beta Gauge measures a clean section of the filter tape for 2 minutes. This provides the zero measurement of that spot of the filter tape.

Step 3 The stepper motor reverses the filter tape until the spot measured in Step 2 is exactly beneath the conical pipe sample gas outlet (46mm [1.8"]).

Step 4 The valve opens to allow the sample gas to flow through the filter tape for the predetermined cycle time. At the same time, the right-hand Beta Gauge measures the clean section of filter tape between its source and detector for 2 minutes to obtain the zero measurement of that spot.

Step 5 The stepper motor advances the filter tape until the spot that just filtered the sample gas is again directly between the source and detector of the left-hand Beta Gauge (46mm [1.8"]).

Step 6 The left-hand Beta Gauge measures for 2 minutes the same spot of the filter tape where it measured the zero previously, only now it is loaded with particulates. Simultaneously, the valve opens to allow the sample gas to flow through the spot of filter tape that was measured for a zero reference with the right-hand Beta Gauge in Step 4 for the predetermined cycle time.

Step 7 After the left-hand Beta Gauge has measured the particulate-loaded spot for two minutes, the particulate concentration is displayed and the 4-20mA output is updated.

Step 8 When the sample gas flow cycle time of Step 6 is complete, the stepper motor reverses the filter tape until the spot measured in Step 4 by the right-hand Beta Gauge is returned, now loaded with particulates (46mm [1.8"]).

Step 9 The right hand Beta Gauge measures the particulate loaded filter spot for 2 minutes, the particulate concentration is displayed and the 4-20mA output is updated.

Step 10 Upon completion of the Step 9, the measurement process begins again at Step 1.

An important consequence of the BetaGuard PM measurement principle is that it always re-zeros the filter prior to depositing the particulate sample. This allows the instrument to reuse the filter spot a number of times before it begins to clog and the filter must be advanced. If this resampling option is selected, the life of a reel of filter tape can be extended from one month to two or three months.

Blowback

When compressed air is provided to the BetaGuard PM and the measurement cycle begins, the compressed air actuates a pneumatically actuated valve that allows the stack gas to be drawn into the instrument and the BetaGuard PM to operate. The position of the pneumatic actuator is sensed to always insure that compressed air is present so that the probe can be blown back on a regular basis to eliminate the possibility of dirt build-up and clogging. The interval between blowbacks is user selectable from the BetaGuard PM display and is usually eight (8) hours. When blowback is initiated, either automatically or manually, a valve is closed to stop sample gas from flowing through the filter tape and high pressure (≈70psig) air is forced through the sample and dilution lines, through the nozzle into the stack. The compressed air is pulsed in 2 second on, 2 second off cycles for about 20 seconds.

Automatic Beta Calibration

This routine is usually run daily and initiated by the data logger and lasts about 30 minutes. Automatic Beta Calibration checks the repeatability of the Beta Gauge measurement component of the BetaGuard PM by performing a zero check, a span check and a filter tape positioning check. During an Automatic Beta Calibration, the normal measurement mode of the BetaGuard PM is suspended. The Automatic Beta Calibration routine can also be initiated immediately through the BetaGuard PM display.

Automatic Flow Calibration

This routine is usually run daily and initiated by the data logger and lasts about 30 minutes. Flow Calibration can be run concurrent to the Automatic Beta Calibration. Automatic Flow Calibration checks the repeatability of the flowmeter components of the BetaGuard PM by routing the same flow through all of the flowmeters at two separate flow setpoints to perform a low span and a high span check. During an Automatic Flow Calibration, the normal measurement mode of the BetaGuard PM is suspended. The Automatic Flow Calibration routine can also be initiated immediately through the BetaGuard PM display.

THEORY OF NUCLEAR GAUGING

There are typically three types of radioactive emission used for industrial mass gauging, Alpha (α), Gamma (γ) and Beta (ß).

Alpha Emission

An Alpha particle is a ^4He nucleus and as such, is very large and heavy compared to the other forms of radioactive emission. They have very limited penetrating ability in solids and since Alpha gauging applications are used primarily for the measurement of gases, they will not be discussed further here.

Gamma Emission

Unlike Alpha (or Beta) radiation, Gamma radiation is not in the form of charged particles, but instead is electromagnetic radiation in and above the X-Ray spectrum. By analogy, a Beta source of, say, 500mCi activity emits as many Beta particles per second as the Gamma photons per second emitted by a 500mCi Gamma source. Unlike Beta particles, Gamma photons are emitted at a single energy determined by the particular isotope and interact with matter through fundamentally different mechanisms. Gamma photons have no charge and no mass, and are consequently much more penetrating than Beta particles in matter (like X-Rays) and are used primarily for quite thick targets and for fluorescence measurements.

Beta Emission

Beta particles are in fact high energy electrons ejected from the nuclei of certain radioactive materials. They are negatively charged, have energies ranging from zero to a maximum energy (units of electron Volts [eV]) determined by the specific radioactive isotope and are emitted in an average number per second defined by the Activity (units of Curies [Ci]) of the particular radioactive source.

Beta particles interact with matter through three primary mechanisms:

1) Inelastic collisions with electrons in the target (*Absorption*)

$$f_1\{k_1\rho(Z/A)\} \qquad \textbf{eq. 11.1}$$

2) Elastic collisions with nuclei in the target (*Scatter*)

$$f_2\{k_2\rho(Z^2/A)\} \qquad \textbf{eq. 11.2}$$

3) Inelastic collisions with nuclei in the target (*Bremsstrahlung*)

$$f_3\{k_3\rho(Z^2/A)\} \qquad \textbf{eq. 11.3}$$

where k_n are constants proportional to the Beta energy,

ρ is target density,

Z is the target Atomic Number and

A is Atomic Mass.

Beta particles are particularly ideal for use in industrial gauging because of their relatively short range in matter and therefore high sensitivity to small changes in mass, and since the source / detector components are very long-term stable and industrially rugged. The Carbon-14 isotope used in most Beta Gauge Particulate Monitors has a half-life of over 5000 years, and therefore exhibits no measurable change in radiation output and thus no measurement drift throughout the life of the instrument. The G-M Tube detectors are simple gas-filled canisters with no moving parts. They exhibit no drift characteristics unless they are physically damaged, in which case their output goes to zero, an easily identifiable fault condition. In the unlikely event of a G-M Tube failure, the dual detector BetaGuard PM has the ability to sense the zero output condition and automatically switches its operating mode to that of a single detector Beta Gauge. In this way, the instrument will continue to measure properly with no loss of data, and repairs can be made in a non-emergency manner.

A consequence of the manner in which Beta particles interact with matter to determine mass is that there can be some measurement dependence on the chemical composition of the specific particulate. It is therefore worthwhile to investigate the extent to which the chemical composition dependence of the BetaGuard PM has on its ability to accurately measure the products of combustion. When considering the design of a Beta Transmission Sensor, a radioactive source is mounted on one side of the target and a Beta particle detector is mounted on the target's other side. The detector then measures the Beta particles that pass through the target.

Assuming that all the Beta particles that do not pass through the target and are not detected are in fact absorbed via mechanism 1, the response curve of the ß-Sensor would describe an exponential dependence (derived from Equation 1 above) on target mass and be independent of target chemical composition.

$$\mathbf{e^{-\mu x}, \text{ where } \mu = f1\{k_1\rho(Z/A)\}}$$

If Equations 2 and 3 above are combined as

$$\mathbf{F\{K\rho(Z^2/A),} \qquad \text{eq. 11.4}$$

then the total interactions of Beta particles with matter can be expressed by the following definition of μ, the absorption coefficient:

$$\mathbf{f_1\{k_1\rho(Z/A)\} + F\{K\rho(Z^2/A)\}} \qquad \text{eq. 11.5}$$

where **k** and **K** include a dependence on the incident Beta energy,
Z is the target atomic number,
A is the target atomic mass, and
ρ is the target density.

Bear in mind that in the case of a Beta Transmission Sensor, any Beta particle that is not detected is assumed to be absorbed.

This implies that if some Beta particles that are not detected interact with the target by some mechanism other than absorption, such as backscatter from the target or deceleration and emission of X-Rays (Bremsstrahlung) that cannot be measured by the Beta detector, then a measurement error may occur. The practical threshold of the target atomic number below which K of equation 5 approaches zero, is a function of the Beta energy. In the case of the C14 Beta-emitting isotope used for particulate monitors, the beta energy (max) is 156kev and for target atomic numbers below 20, **K** of Equation 5 can be considered to be zero and the sensor is virtually insensitive to compositional changes.

If the target contains components of atomic number greater than 20, such as Iron, Chromium or lead, then **K** of Equation 5 is not zero, and any variation in the relative concentration of these elements may cause a measurement error proportional to the $\mathbf{Z^2/A}$ additive function **(F)** which becomes more pronounced with increasing concentration and increasing Z.

Compound	*Class F*	*Class C*
SiO_2	**48**	**33**
Al_2O_3	**20**	**18**
Fe_2O_3	**20**	**8**
CaO	**3**	**25**
MgO	**1**	**8**
K_2O	**2**	**1**
Na_2O_3	**1**	**3**
SO_3	**1**	**3**
LOI	**3**	**0.5**

Figure 11.1: Coal Fly Ash Composition by Class

It is important at this time to qualify the magnitude of any error due to changing chemical composition in stack gas effluent. One principle application of the BetaGuard PM is the measurement of airborne particulates from the stacks of coal-fired electric generating utilities. The typical fly ash chemistry will vary as a function of the fuel and can range from high Fe_2O_3, low CaO to high CaO, low Fe_2O_3 in the cases of various Lignite and Anthracite coals (see Figure 11.1).

Equation 5 can be rewritten in terms of the detected Beta particles passing through the target as:

$$\mathbf{I = I_0 \Sigma e^{-w_i \mu_i \rho x}} \qquad \textbf{eq. 11.6}$$

where **I** is the Beta particle intensity after passing through the target,
$\mathbf{I_0}$ is the original intensity of Beta particles emitted from the source,
μ_i is the Beta attenuation coefficient of each element in the target (the i^{th} element; physically, μ can be viewed as the probability of interaction per unit distance),
$\mathbf{w_i}$ is the concentration by weight of the i^{th} element,
ρ is the homogeneous material density and
x is the homogeneous material thickness.

μ_i is a function of the Beta particle energy, E, and the electron density of the absorber and is of the form,

$$\mu_i = Ci_1E(Z/A) + Ci_2E(Z^2/A)$$

where **Ci_1** is an empirically derived constant for mechanism 1 above and **Ci_2** is an empirically derived constant for the combined mechanisms 2 and 3 above.

It is interesting to compare the energy lost by each of the two terms above. Dividing these terms,

$$[(dE/dx)_{2,3} / (dE/dx)_1] = [Ci_2E(Z^2/A) / Ci_1E(Z/A)] = C \cdot E \cdot Z,$$

where **C** is a new constant, empirically derived as approximately 1/500 when **E** is in units of Mev.

At a maximum Beta energy for C14 of 0.156Mev, the amount of error created by a change in fly ash chemical composition of 15% Fe (Z = 26) is 0.8%. Substituting this effect into the exponential argument of equation 6, the effect of even this large a change in the higher atomic number composition of the fly ash chemistry will lead to at most a 1% measurement change not attributable to the consequent change in real particulate density.

For this reason, the BetaGuard PM is calibrated in the factory to a known, traceable set of mass standards. Upon installation on a stack, there is virtually no subsequent recalibration of the instrument required for the various application specific fly ash chemistry. The BetaGuard PM is virtually insensitive to chemical changes in the products of combustion. It will measure the particulate mass correctly and repeatably. In the cases of installation of the BetaGuard PM on other combustion or incineration processes that emit high atomic number pollutants, a correction factor may be required to bring the BetaGuard PM into calibration. This is facilitated by user-enterable scaling or offset factors stored in a comprehensive recipe in the Gauge electronics.

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Beta Gauge Particulate Monitoring - Theory and Practice

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Venue: CEM User Group Meeting 1999
Cincinnati, Ohio
May 12-14, 1999

Sponsors: Electric Power Research Institute, Inc.
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Continuous particulate monitoring is becoming an issue in the electric utility industry. Title V permitting, compliance assurance monitoring, and credible evidence rules are forcing the utility industry to look critically at the question of particulate emissions. The industry has known for some time that changing the operating parameters of electrostatic precipitators can result in changes in particulate emissions. What has become evident recently to both utilities and regulators is that there are other factors that can significantly influence particulate emissions independent of precipitator operation, and these factors are not well documented. Unless these factors can be characterized properly or somehow related to full load stack tests, monitoring may become necessary.

Few electrostatic precipitators operate at full power all of the time. It is standard practice to vary precipitator power on the basis of external parameters such as load, opacity, spark rate, etc. and take for granted that the emissions remain in compliance with permit conditions. Even though particulate tests are normally only done at full load and under one set of operating conditions, it is assumed that precipitator operating parameters can be varied from full load test conditions and not affect emissions. Many utilities are beginning to question this assumption. What is really happening when precipitator operation is optimized using some other parameter than actual emissions? Are the emissions going up or going down?

The introduction of low NOX burners on an industry wide basis has complicated the problem. Poor efficiencies and higher loss on ignition have plagued many plants and resulted in numerous changes in firing procedures and precipitator operating parameters. Every change affected particulate emissions, but little if any data has been collected to document the effect of the changes.

The use of different coals and other opportunity fuels has had even more effect on particulate emissions. The change from a high sulfur eastern bituminous coal to a low sulfur western subbituminous coal has well known effects on the amount of ash generated and the amount of particulate emissions produced. What has been surprising is the growing body of evidence suggesting that changing coal within the same classification can also noticeably affect emissions. Changing from one bituminous coal to another bituminous coal may noticeably change particulate emissions. Those plants that are constantly changing or blending fuels will not be able to use periodic performance testing to determine particulate emissions unless all combinations of coals are tested.

Continuous verification of acceptable particulate emissions will become necessary when either regulators or utility risk managers become uncomfortable with undocumented operation. When this happens plants need options as to how to monitor particulates. While there is a concerted effort to see if modeling will work to address these problems, there will be significant difficulty in the application of this approach for those plants that require flexibility in operation. Continuous particulate emission monitors will likely be the instrument of choice for those facilities that cannot operate within very narrow and well defined ranges.

Historically there have been four types of particulate monitors:

- Gravimetric (Reference method)
- Triboelectric (Broken bag detectors)
- Optical
    - Light Transmission (Opacity monitors)
    - Scintillation
    - Light Scatter
        - Back
        - Side
        - Forward
- Beta Gauge

The gravimetric method has been used as the reference method with little or no application for continuous particulate monitoring. Recent refinements in the reference methods to measure lower concentrations have resulted in much more complicated procedures. This has only made it less likely that any continuous gravimetric instrument will ever be developed.

Triboelectric instruments have been used extensively as a cost effective method of monitoring catastrophic failures in fabric filters and baghouses. Although there are notable efforts in both England and Germany at this time to use these devices for compliance monitoring, the application in North American utilities is not expected to be that significant where the vast majority of particulate control is done by electrostatic precipitators.

Precipitators impart a charge to the entrained particles which is similar to the effect the triboelectric devices are measuring. This makes measurements very difficult if not impossible to characterize for most utility applications with this technology.

Light transmission devices or opacity monitors have been used extensively for visible emission compliance in the United States for over twenty years. The technology has worked well in the utility industry when opacity limits were in the 20% to 40% range. As permit limits come down, the correlation between mass concentration and light transmission becomes very difficult to measure with opacity monitors. The technology becomes unreliable and unable to accurately measure particulate concentrations below 50 mg/scm (.02 gr/scf). The EPA has expressed significant doubts that this technology will be acceptable for continuous particulate monitoring. As a result, opacity monitors have not been included in most of the official EPA tests and are not expected to have a significant presence in the particulate monitoring market.

There is another optical technology which uses the ability of particles to scatter light instead of obscure light to produce more accurate measurements. Light scattering instruments as a group have been used in Europe for almost the same amount of time as opacity monitors have been used in the United States. The results have been uniformly good at emission detection limits significantly below those presently seen with opacity monitors.

There are three variations of this technology; forward scatter, side scatter, and back scatter. All of the scatter technologies can work well under the right conditions and generally have the same limitations and restrictions as opacity monitors with one exception. Most scatter instruments do not measure across the stack, but measure a point a set distance in from the stack wall. This point is normally less than one foot from the stack wall which can be a problem for large utility stacks. The boundary layer effects that have been found and documented in recent flow studies by EPRI and the EPA will affect the distribution of particulates near the stack walls. Analyzing the sample at a more representative location farther from the stack wall will help ensure more accurate measurements.

Scatter instruments are very similar to opacity monitors in terms of operation and maintenance and will likely be the instrument of choice where they can be certified. They solve the lower detection limit problem of opacity monitors and only need one stack opening to be installed. With optical based scatter instruments apparently working well in other parts of the world, why is there a need for another method to monitor particulate?

Beta transmission technology was developed to address three very specific applications; wet stacks, changing stack conditions, and changing particle properties. Optical instruments cannot measure in wet stacks. Entrained moisture refracts, reflects, and diffracts light making it impossible for optical technology of any kind to work correctly. For years the opacity readings reported for wet scrubber stacks were taken before the scrubbers to circumvent this problem. While this may continue to be allowed, there is an incentive to move the particulate monitor to the stack to report more accurate data and take advantage of a scrubber's natural ability to remove particulate from the exhaust gas stream.

It is also well documented that changing stack conditions and changing particle properties make optical measurements unreliable. Figure 1 shows the problem associated with changing the particle size distribution in a stack. As the particle size varies, optical instruments will produce different readings even though the actual mass emission is not varying. Particle size variations occur commonly as the operating parameters on an electrostatic precipitator are varied.

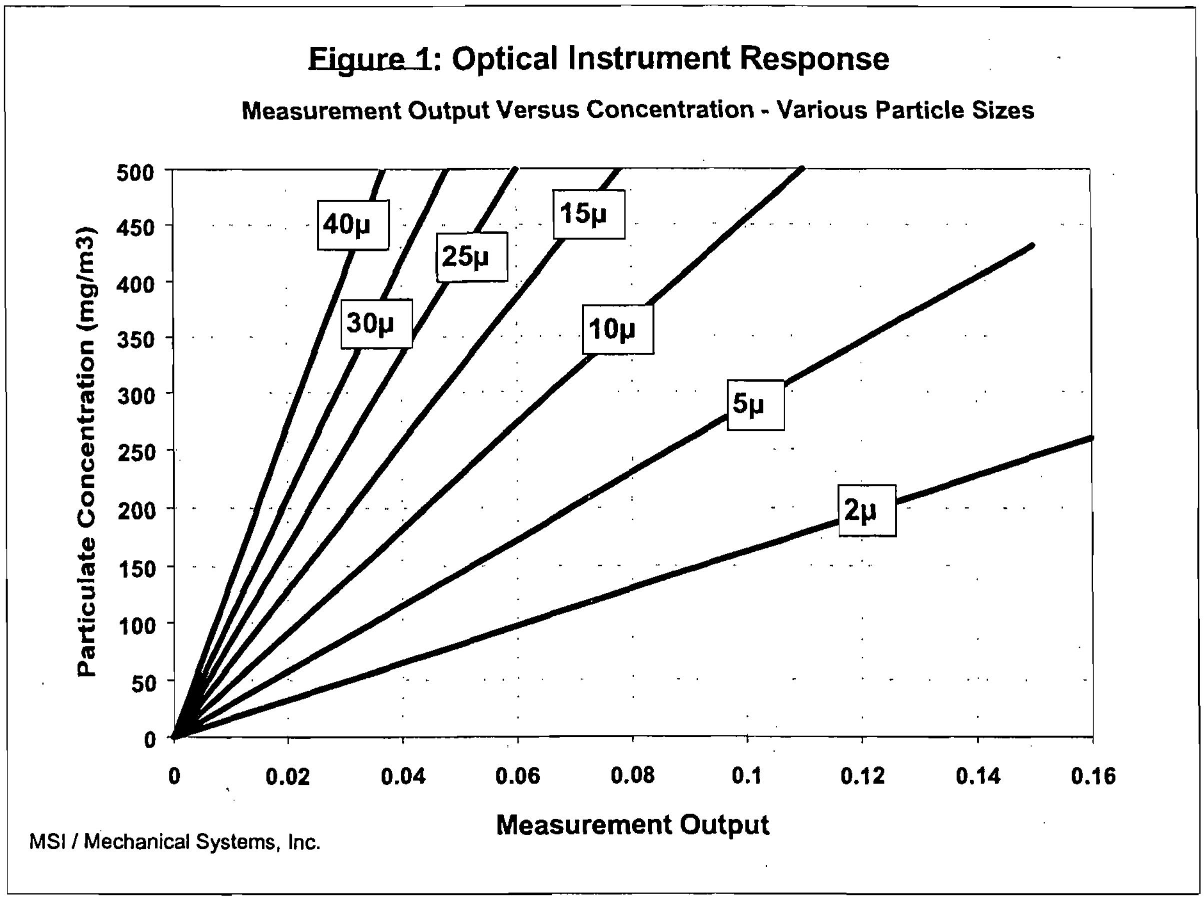
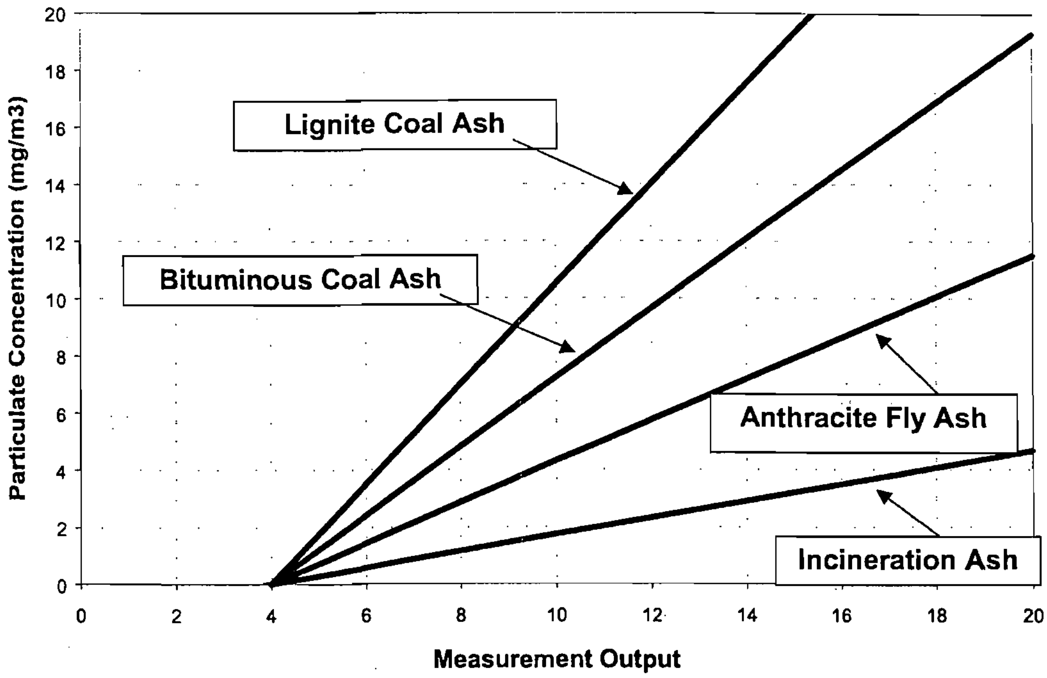


Figure 2 depicts a similar problem when the type of fuel changes. Here again optical instruments produce different outputs depending on the type of coal being burned and not on the amount of mass being emitted.

The difference in readings noted in Figure 2 are for several different types of coal but similar graphs can be produced for coals within the same classification. There are different optical responses between low sulfur and high sulfur eastern bituminous coal and between high sulfur West Virginia coal and high sulfur Illinois coal.

Figure 2: Optical Opacity Instrument

Measurement Output Versus Concentration - Various Ash Types



MSI / Mechanical Systems, Inc.

Different coals produce different outputs for the same mass emission in optical instruments for many different reasons. The average size distribution could be changing. The color or refractive index of the coal could be changing. The moisture in the coal could be changing. The average heat content/velocity in the stack could be changing. Optical instruments work well and are a cost effective solution when things don't change. For utilities with changing conditions or utilities who do not want to be limited to a one set of operating conditions, another technology had to be found.

The beta gauge particulate monitor is uniquely suited for documenting compliance of source particulate emissions and for optimizing precipitator and fabric filter operation. Beta gauge measurements are not affected by stack conditions or by particle characteristics.

Beta gauge measurements show no sensitivity to stack velocity, temperature, and moisture, or to particle size, shape, color, and refractive index. This non-optical technology can be installed in wet or dry stacks and will measure reliably even when the characteristics of the particulate emissions are constantly changing.

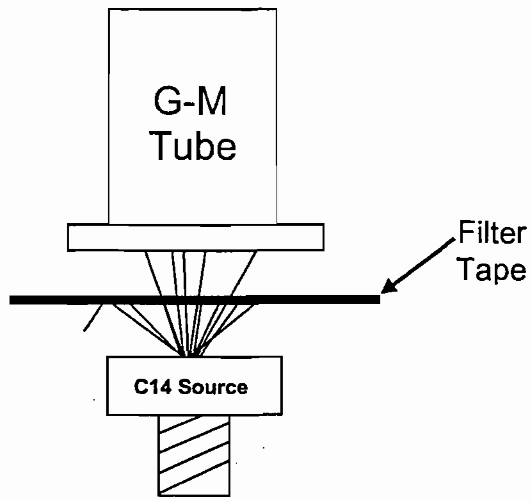


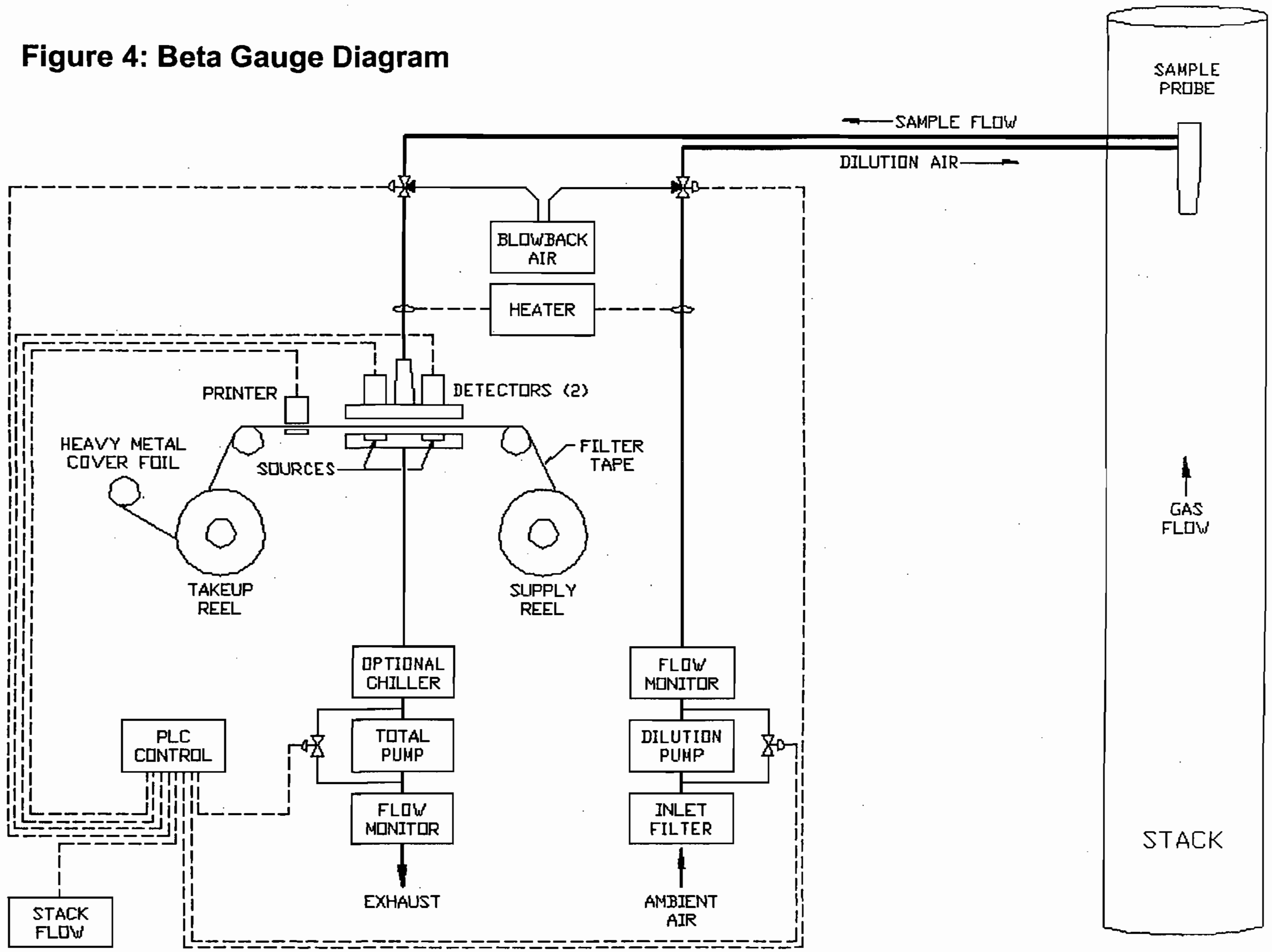
Figure 3: Beta Transmission Sensor

Figure 3 shows a typical beta gauge source and detector combination. A low energy Carbon-14 source furnishes a constant supply of beta electrons which are detected by a Geiger Mueller tube or photodiode array. A filter tape is interposed between the source and detector which produces an initial reduction in the number of beta electrons reaching the detector. The particulate measurement cycle begins by measuring a clean area (spot) on the tape for a fixed time period to determine a zero value. This clean spot is then moved under a collection apparatus for sample extraction from the stack. A sample of stack gas is drawn through and deposits particulate on the filter tape. All particles above 0.1 microns are collected. Once a sufficient amount of sample is collected on the filter tape, the tape is moved back under the beta source and remeasured. The difference in beta emissions measured from the original clear spot to the collected sample is directly proportional to the mass on the tape.

Figure 4 shows a diagram of the complete beta gauge. The beta gauge extracts a sample isokinetically from the stack using a dilution probe to suppress moisture and increase sample flow. The sample is transported through a resistance heated line at high velocity to maintain particulate entrainment and prevent sample loss. The particulate is drawn through and deposited on a filter tape in a heated collection holder (Figure 5). The tape is held in place and sealed from the surrounding atmosphere by the heated holder. Heating the holder prevents condensables from dropping out of the sample during the collection process.

The sample is collected for a set period of time or until a maximum pressure differential through the tape is detected. The tape is then moved back under the beta source and re-analyzed for total mass. During the time mass is building up on the tape, the beta gauge is also measuring the sample volume extracted from the stack to produce that mass. Combining the mass collected with the sample drawn provides an output for mass concentration.

Figure 4: Beta Gauge Diagram



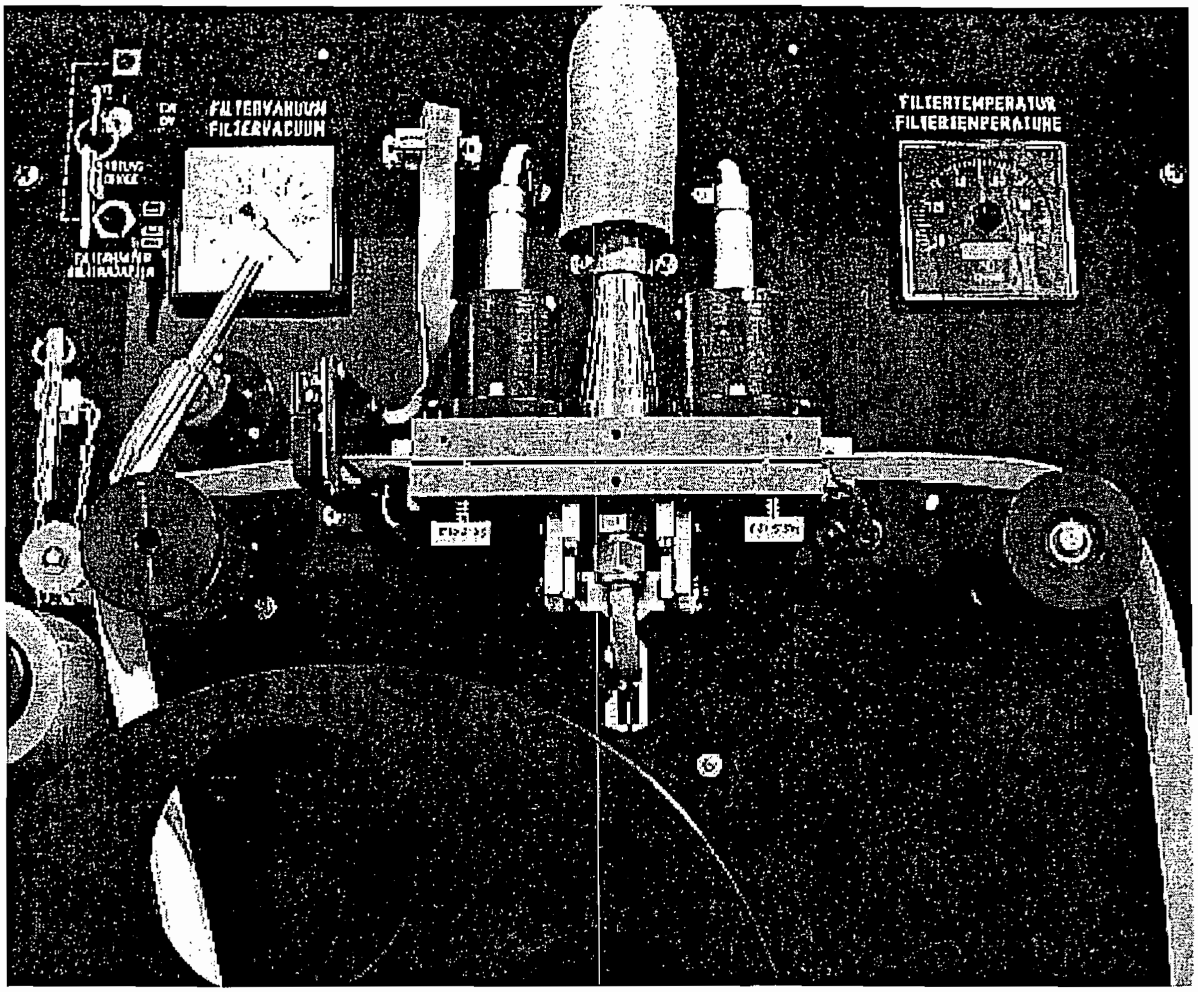


Figure 5: Beta Gauge Measuring Head

While relatively straightforward in concept, the actual sample extraction and measurement have proven much more difficult in practice. A great deal of time has been spent devising reliable methods for sample extraction and transport. Figure 6 shows the dilution probe used to extract the sample from the stack. As dilution technology addressed many of the sample conditioning problems with gas monitoring for the Acid Rain Program, dilution technology also addresses many of the sample conditioning problems with mass emission extraction.

Figure 7 shows the detail of the sample extraction nozzle at the end of the dilution extraction probe. Accurately measured dilution air is introduced into the probe at right angles to the extracted flow. The dilution air surrounds and envelopes the sample to minimize contact with the sampling system components. Rapid mixing of the dilution air and sample follows due to the turbulence produced in the mixing chamber.

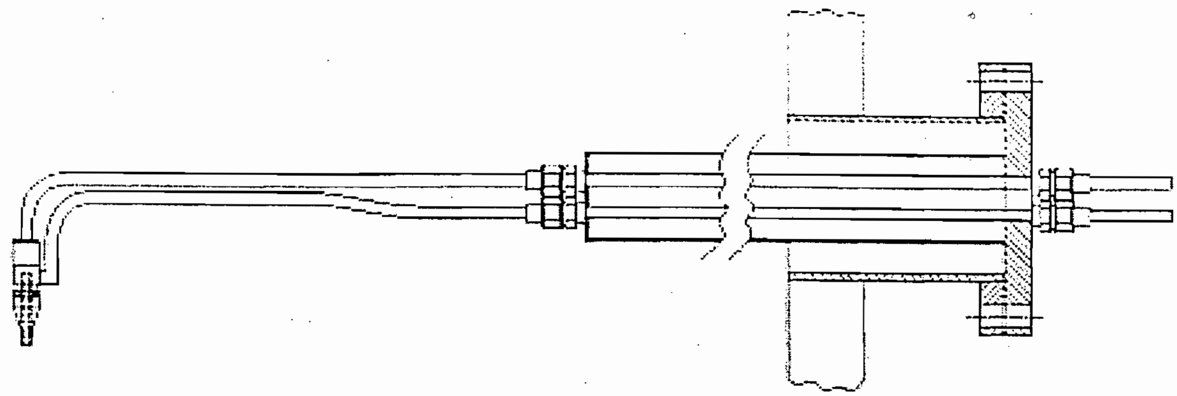


Figure 6: Beta Gauge Dilution Probe

This rapid mixing suppresses the moisture in the sample and eliminates the problem of condensation in the sample line. Moisture condensation trapping particulate in the sample line is one of the more difficult problem associated with particulate sample transport from saturated stacks. Without dilution the transport of the sample becomes progressively more unreliable as the moisture content of the sample increases.

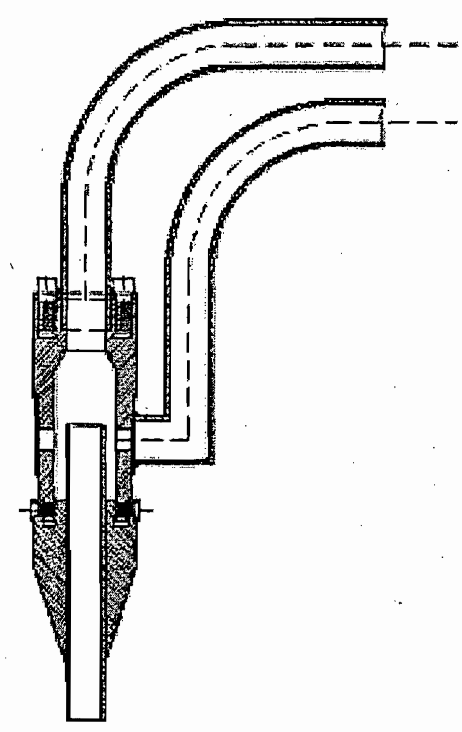


Figure 7: Dilution Probe Detail

Diluting the sample simplifies the transport of particulate samples from all types of stacks and allows wet scrubber stacks to be analyzed as accurately as dry stacks. Using dilution air also provides enough excess air so that there is more than enough flow to maintain a critical sample velocity. This is true even though the sample is extracted isokinetically from the stack and the amount of flow can change drastically from low load to high load operation. The total sample transported to the filter tape is maintained above critical sample velocity at all times by dilution air alone. The total sample flow is not dependent on the extracted sample flow to prevent sample loss during transport.

Maintaining a high sample velocity is absolutely critical to ensure that the sample is deposited on the tape and not in the sample tubing. At present sample tubing lengths up to fifty feet are possible under all stack conditions and could be longer on a case by case basis.

Flow monitors measure both the dilution air supplied to the probe and the total sample (dilution air plus extracted sample) drawn through the filter tape. The difference between the two measurements is the sample extracted from the stack. The sample extraction rate is controlled isokinetically by varying the dilution flow and maintaining constant the total sample drawn through the filter. This variation is based on an external flow measurement taken directly from the existing stack flow monitors or through the 40CFR75 data acquisition and handling system.

The beta gauge has a resistance heated sample line which is maintained at a constant temperature of 120° Celsius for Method 5/5i testing or allowed to vary slightly above stack temperature for Method 17 testing. Keeping the sample temperature slightly above stack temperature for Method 17 testing provides a more accurate measurement of front half particulate by ensuring that condensables are neither formed nor destroyed during sample transport. The resistance heated sample line is driven by low voltage AC transformers that operate at either 6 Vac or 12 Vac depending on the length of sample line. The heating circuit is formed by passing a current through the sample line, probe, and dilution line. The probe and connected sample and dilution lines are electrically insulated from the probe holder to allow the probe inside the stack to be heated.

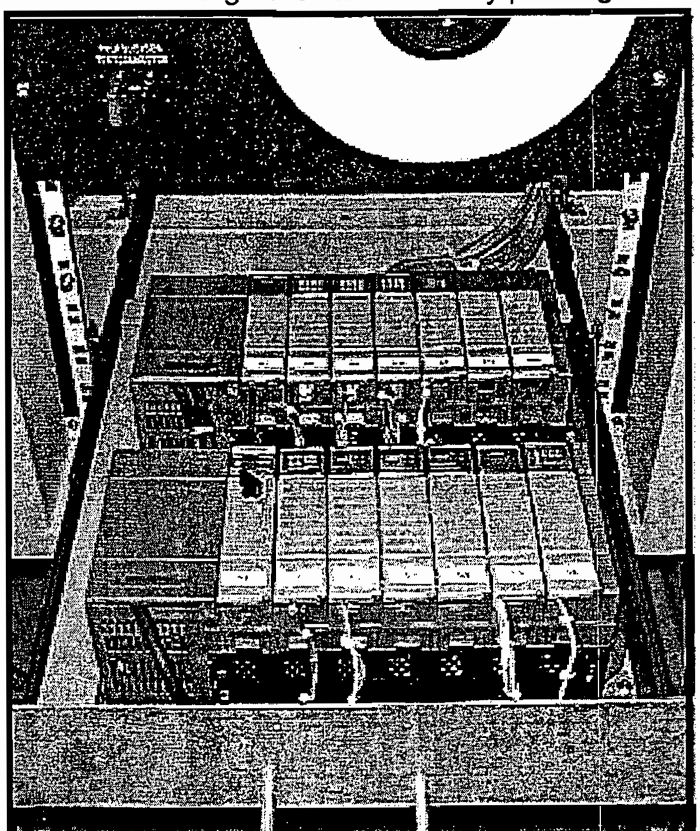


Figure 8: Allen-Bradley SLC500 PLC

The sample line is 0.50" diameter by 0.035" wall Type 316 seamless stainless steel tubing. The interior surface of the tubing is specially cleaned and polished to minimize particle entrapment. The fittings and valves in the sample line likewise are specially prepared to minimize turbulence and eddies that might allow particulate to fall out of the sample stream during transport to the filter tape.

The beta gauge is controlled by an Allen-Bradley SLC 500 programmable logic controller (Figure 8). The PLC controls the filter tape movement, pump operation, measurement cycles, and all aspects of instrument operation.

The PLC also calculates the concentration and mass emissions and outputs this information in analog (4-20 mA) or serial form (RS-232/485). Digital contact closures indicating system operations including calibrations, blowbacks, and alarms are also available. The PLC can accept digital inputs to control calibration or blowback cycles.

Other advantages of the beta gauge worth noting are:

1. The EPA calibration correlation between mass emissions and output is linear with a beta gauge. All optical instruments show decidedly non-linear operation which makes initial calibration and set up of the instruments for particulate monitoring difficult.
2. The collected samples can be protected for latter analysis by other techniques such as x-ray diffraction for heavy metals. A polyester cover foil dispenser used to protect the sample, and a dot matrix printer used to mark the filter tape with date and time and collected mass.
3. Automatic blowback of the sample lines during filter tape transport is standard to ensure the sample probe tip does not become plugged. Additional timed or manual blowbacks can also be initiated as required.
4. Quarterly audits using NIST traceable standards are possible.
5. Dual measurement heads minimize the amount of sample time lost to the batch process. Should a Geiger Mueller tube fail, the instrument automatically goes into single head sampling mode.
6. Multiple spot resampling extends the life of the filter tape. The measured amount of mass of one cycle becomes the zero of the next cycle.
7. An optional high capacity chiller is furnished for dry basis measurements. This chiller is rated at over 50 lpm and comes complete with integral temperature control and water carryover alarm.

Particulate concentration is rather unique in being one of the few Title V permit parameters that is not directly measured by utilities. It is not reasonable to assume that this situation will go on too much longer given the significant contribution utilities make to controllable particulate emissions in ambient air. The reference methods are being revised, and the performance specifications are being finalized at this time for particulate monitors. The process has been anything but easy or well controlled and is being driven by an industry, hazardous waste incinerators, that could not be more different in approach or application than the electric utility industry. Many utilities now face the installation of significant new capital equipment for controlling nitrogen oxides which will only make particulate monitoring more difficult for all instruments except beta gauges.

Beta gauge measurements can be used not only to monitor but also to control electrostatic precipitators and fabric filters. Performance of exhaust gas cleanup equipment in the future will likely be optimized based on actual emissions and not on other easier to measure, but less reliable and less accurate parameters. It is surprising this is not being done now and even more surprising that little attention is being given to this problem by the utility industry. The impact on the utility industry could be significant and deserves to be addressed in a more involved manner.

The technology is there to do the job. Beta gauges and other mass emission monitoring technologies have been in use for years. Beta gauge and scatter technologies in particular need to be applied and tested now by the utility industry to confirm applicability and long term viability. We suggest it is time for this process to begin before some unexpected event forces the issue on an unprepared industry.

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Jonathan Holtom
2. DARM/BAR
3.
4.
5. MS #5500

PLEASE PREPARE REPLY FOR:

- ____ SECRETARY'S SIGNATURE
- ____ DIV/DIST DIR SIGNATURE
- ____ MY SIGNATURE
- ____ YOUR SIGNATURE
- ____ DUE DATE ________

ACTION/DISPOSITION

- X DISCUSS WITH ME
- ____ COMMENTS/ADVISE
- ____ REVIEW AND RETURN
- ____ SET UP MEETING
- ____ FOR YOUR INFORMATION
- X HANDLE APPROPRIATELY
- ____ INITIAL AND FORWARD
- ____ SHARE WITH STAFF
- ____ FOR YOUR FILES

COMMENTS:

CAM Plan response from Rayonier, Inc.

Due 11/1

FROM: Rita Smith DATE: 9-8-03 PHONE: SC 804-3237

DEP 15-026 (12/93)

Rayonier

Performance Fibers
Fernandina Mill

RECEIVED
OCT 10 2003
BUREAU OF AIR REGULATION

October 3, 2003

RECEIVED
OCT 06 2003
STATE OF FLORIDA
DEPT. OF ENV. PROTECTION
NORTHEAST DISTRICT-JAX

__Certified Mail, Return Receipt Requested__

Mr. Christopher L. Kirts, P. E.
District Air Program Administrator
7825 Baymeadows Way, Suite B200
Jacksonville, FL 32256-7590

RE: Nassau County Air Permitting for Rayonier Inc.,
Final Title V Permit No. 0890004 - 005- AV Renewal
RAI July 9, 2003

Dear Mr. Kirts:

I am responding to your letter dated July 9, 2003 requesting additional information regarding the application for renewal of the above referenced permit. The questions are answered in the order asked in your letter, but have been partially repeated here for clarity.

1. **Someone other than the designated Responsible Official, Mr. Burch, signed the construction permit application for the three power boilers.**

   I, Michael Burch, duly assigned my responsibility as General Manager in my absence to one of my subordinates. With that delegation goes all of my signing responsibilities, including that as the Responsible Official for the Title V permitting requirements for this facility, unless I specifically exempt one or more of those responsibilities. The Responsible Official is the General Manager, who at this moment happens to be me. Nevertheless, I am providing a signature page with my signature affixed.

Boiler Number 1 and Boiler Number 2

2. **The choice of the venturi pressure differential and liquid flow rate through the scrubber are acceptable indicators to monitor. However, indicator ranges must be clearly stated in the monitoring approach table. The selection of the indicator ranges must also be clearly justified and demonstrate that operation at those levels is protective of the allowable emissions limitations. Please provide a table of test data that correlates the maximum and minimum pressure differentials and flow rates to the tested PM emissions levels.**

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

The specific tests on which the ranges were based have been included in the CAM Plan. The attached report by CAPSTONE Technology Corporation dated June 3, 2003 contains more detailed justification for the selection of indicator ranges for power boilers 1 and 2.

3. **Because boiler numbers 1 and 2 both utilize venturi scrubber A for control of PM emissions, in the event of an excursion, please describe how it will be determined which of the boilers is in danger of exceeding it's emissions limit.**

   Oxygen concentration is being used as an indicator of good combustion. Whichever boiler fails to remain in its assigned oxygen range will be assumed to be the boiler in danger of exceeding it's emissions limit. However, oxygen concentration out of range alone may not be sufficient to conclude the boiler is out of compliance. The scrubber may be reducing its inlet loading from the boilers sufficiently to achieve the permit limits.

4. **Please identify the selected indicator ranges that are justified by the submitted data. Indicator ranges should be sufficiently protective of the emissions standards in order to prevent exceedances. Provide ample justification to show that the selected indicator ranges are sufficient for assuring that emissions from both boilers numbers 1 and 2 will remain below their respective emissions limits.**

   Again, the CAPSTONE Technology Corporation provides the information to assure that the limits are sufficient to protect against exceedances. We have included in the CAM Plan a table of the EPA Method 5 tests on which the surrogate ranges were based. In addition, to show how we plan to prevent exceedances we have attached the operator training manual illustrating the extensive alarms and controls, which will shut down the boiler before an exceedance occurs.

Boiler Number 3

5. **The choice of venturi pressure differential and liquid flow rate through the scrubber are acceptable indicators to monitor. However, indicator ranges must be clearly stated in the monitoring approach table. The selection of the indicator ranges must also be clearly justified and demonstrate that operation at those levels is protective of the allowable emissions limitations. Please provide a table of test data that correlates the maximum and minimum pressure differentials and flow rates to the tested PM emissions levels.**

   The specific tests on which the ranges were based have been included in the CAM Plan. The justification of the indicators for No. 3 power boiler is also presented in the CAPSTONE Technology Corporation report.

6. **Please identify the selected indicator ranges that are justified by the submitted data. Indicator ranges should be sufficiently protective of the emissions standards in order**

to prevent exceedances. Provide ample justification to show that the selected indicator ranges are sufficient for assuring that emissions from boiler number 3 will remain below its emissions limit.

Again, the CAPSTONE Technology Corporation provides the information to assure that the limits are sufficient to protect against exceedances. We have included in the CAM Plan a table of the EPA Method 5 tests on which the surrogate ranges were based. In addition, to show how we plan to prevent exceedances we have attached the operator training manual illustrating the extensive alarms and controls, which will shut down the boiler before an exceedance occurs.

7. **The permit contains statements recognizing the fact that the emissions from boilers number 1 and 2 will be ducted to venturi scrubber B on an "as needed" basis. Please describe how this action is documented and how the indicator ranges for venturi B will be impacted if an additional load is imposed on this scrubber from boilers number 1 and 2.**

The ducting of boiler 1 or 2 to venturi scrubber B is a very infrequent occurrence. Each scrubber has its own fan. The scrubber fan limits the emissions volume from all boilers feeding the scrubber. Therefore the ability to scrub the particulate continues to be controlled by the pressure drop of and liquid flow rate to the venturi scrubber. The particulate loading from the boilers continues to be controlled by the oxygen concentration parameter. The alarm procedures used when boilers are ducted to the other scrubber are described in the operating training manual attached. The boiler operating log records which scrubber the boiler is vented to.

Recovery Boiler

8. **This CAM Plan is not approvable as submitted due to the proposed installation of the extractive beta gauge particulate monitor. A demonstration has not yet been presented that the Beta gauge monitor can continuously and accurately measure actual PM emissions from the recovery boiler. In order to complete this application, please provide a table of data that correlates PM test results to the concurrent Beta gauge monitor readings. In addition, please provide a particle size distribution chart that details the size of the particulate emitted from the recovery boiler.**

Justification for the ranges selected and the method used is now provided in the CAM Plan. The data speaks for itself. See the correlation results between the Beta gauge output and the method 5 stack tests in the graph on page 22 of the revised CAM Plan which is attached. The correlation coefficient exceeded 0.96. The CAM Plan also states the maximum Beta Guard Monitor reading to ensure compliance.

Outlet particle size distribution has no relevance for the CAM plan because it has no relevance on the particulate permit limit for which compliance assurance monitoring is proposed. Inlet particulate sizing does effect control equipment collection efficiency. But the collection equipment is sufficiently efficient to achieve the permit limit as indicated by all the testing used in the CAM Plan. Rayonier has no data on inlet particulate particle size. Rayonier did go to the expense of having particle size estimated for some of the recent stack tests. The report on these results is attached. The sampler itself is taking an isokenetic sample, therefore its sample of particulate from the stack will match that obtained by an EPA Method 5 stack test.

9. **Because the facility must be in compliance with the CAM regulations when the renewal permit is issued, if it is not going to be possible to provide the information requested in comment 7 in a reasonably short period of time, please provide a table of data that correlates VE test results to the concurrent PM tests that are conducted annually.**

Question 7 has been addressed above. There is no need to provide data that correlates VE test results to the concurrent PM tests. In any event, VE, assuming this means Method 9 tests, would not satisfy the CAM Plan requirements.

It is more likely this question refers back to question 8. Again VE, Method 9, would not satisfy the CAM Plan requirement. Further, regarding the use of a continuous opacity monitor, Rayonier has provided information in the past illustrating that for the ammonium bisulfite process recovery boiler the particulate reflectance renders such monitors practically useless by overstating opacity and not correlating to PM emissions. Also, the stack emissions are wet and opacity monitoring that would meet the CAM requirements would not be possible.

10. **Based on the information provided in either comment 7 or 8, please identify the selected indicator ranges that are justified by the submitted data, and that are sufficiently protective of the emissions standards in order to prevent exceedances.**

Those have been provided in the CAM Plan.

CAM Plan Table A

11. **Table A contains a section of information about Abnormal Operations for periods of Fuel Transition, Cold Start-up and Warm Start-up. The presented approach is not acceptable as 40 CFR 64 does not provide a means for ignoring monitoring data. The selected indicators must be monitored at all times the emissions unit is in operation.**

The monitoring of the indicators will continue at all times. However, this comment was meant to convey that the equipment may not be able to operate within the CAM surrogate parameters during period of Start-up, Shut-down and Malfunction. During these situations the appropriate exemption will apply.

If you have questions regarding this response please call Dave Tudor at (904)277-1452, e-mail: david.tudor@rayonier.com, or Dick Hopper at (904)277-1480, e-mail: dick.hopper@rayonier.com.

Sincerely,

WMBurch

W. M. Burch
General Manager

WMB/th

cc: DBD RHW TKA DET RWH

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: **W. M. Burch, General Manager**	
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: **Rayonier, Inc.** Street Address: **P. O. Box 2002** City: **Fernandina Beach** State: **FL** Zip Code: **32035**	
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: **(904)277-1410** Fax: **(904)277-1411**	
4. Owner/Authorized Representative or Responsible Official Statement:	

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

W M Burch 10/3/03

Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**
2. Professional Engineer Mailing Address:
   Organization/Firm: **Golder Associates Inc.**
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 336 - 5600** Fax: **(352) 336-6603**

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [X], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

David A. Buff — 10/2/03

Signature — Date

(seal)

* Attach any exception to certification statement.

RJ Lee*Group*, Inc.

350 Hochberg Road, Monroeville, PA 15146
(724) 325-1776 • (724) 733-1799 FAX

August 21, 2003

Mr. Bill Mayhew
Source Testing And Consulting Services, Inc.
130 Thomas Mill Rd.
Holly Springs, NC 27450

RE: Results from CCSEM Analysis
RJ Lee Group Project Number ESH308092

Dear Mr. Mayhew:

Enclosed you will find a summary of the analytical results for the four samples which we received on August 4, 2003 (reference Request for Analytical Services dated August 1, 2003). The samples were identified as follows:

Source Testing Sample ID	RJ Lee Group Inc. Sample No.	Description
200 Run 4	623964	Quartz fiber filter
19 Run 4	623965	Beaker with particulate
225 Run 6	623966	Quartz fiber filter
10 Run 6	623967	Beaker with particulate

The purpose of this investigation was to provide particle size distribution data related to the particulate matter collected on the sample.

The Beaker samples were prepared by suspending the particulate into hexane, sonicating the suspension for 30 seconds, and redepositing the particulate matter onto a polycarbonate (PC) filter. The filter samples were plugged and rinsed with hexane to liberate particles from the filter. The suspension was deposited onto a PC filter. The particles were analyzed by computer-controlled scanning electron microscopy (CCSEM) techniques.

CCSEM Evaluation

Sample 200 Run 4 (623964): This sample was not analyzed via CCSEM analysis due to problems liberating particles from the filter and dissolution of the particles into the suspension. A Manual SEM analysis was performed on the as-received filter to illustrate the particulate observed. The particles were composed of S/K/Na/Si-rich material and some of the particles appear to have crystallized after the sampling process. Figures 1 and 2 are images of the as-received filter and the particles observed.

Sample 225 Run 6 (623966): The same issues occurred during preparation as in the above sample, therefore a manual SEM analysis was performed and the particles were composed of S/K/Na/Si-rich material. Again, as observed in the above sample, the particles appear to have crystallized after the sampling process . Figures 3 and 4 illustrate the as-received filter and the particles observed.

The following two tables report the Number Percent distribution by measured physical diameter for each sample:

Sample 19 Run 4 (623965): This samples was mostly composed of S-rich particles.

Table 1. Number % Distribution by Average Diameter (microns)

Classes	Number %	0.1 - 2.5	2.5 - 10.0	10.0 - 20.0	20.0 - 50.0	50.0 - 100.0	>>>
	100.0	87.7	12.0	0.2	0.0	0.0	0.0
Totals	100.0	87.7	12.0	0.2	0.0	0.0	0.0

Sample 10 Run 6 (623967): This sample was mostly composed of S/Ca-rich particles.

Table 2. Number % Distribution by Average Diameter (microns)

Classes	Number %	0.1 - 2.5	2.5 - 10.0	10.0 - 20.0	20.0 - 50.0	50.0 - 100.0	>>>
	100.0	88.5	11.0	0.5	0.0	0.0	0.0
Totals	100.0	88.5	11.0	0.5	0.0	0.0	0.0

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified to return the samples covered by this report, RJ Lee Group will store them for a period of thirty (30) days before discarding.

Should you have any questions regarding this information, please do not hesitate to contact me.

Sincerely,

David M. Williams
Project Scientist
Environmental Services

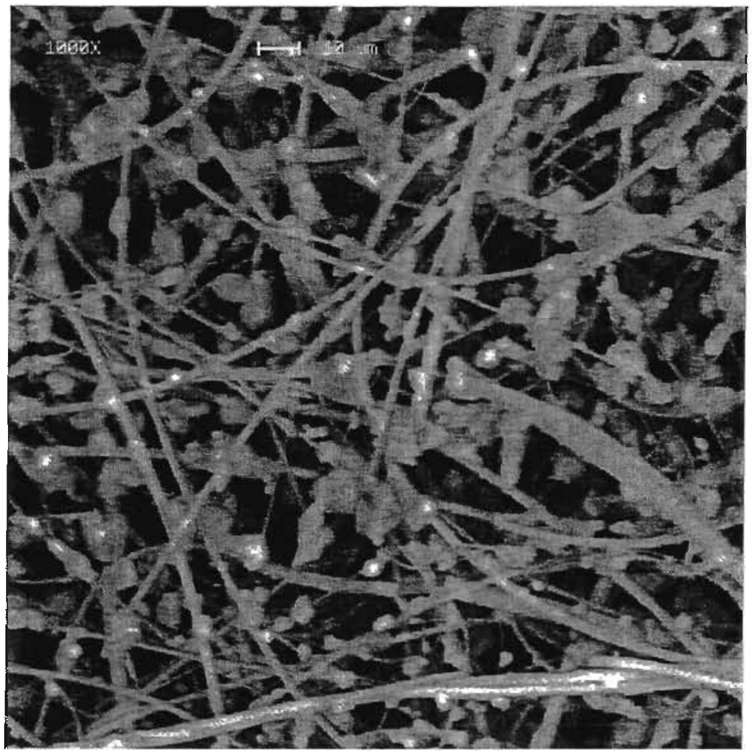


Figure 1. Image of as-received filter with particulate observed on sample 200 Run 4 (623964).

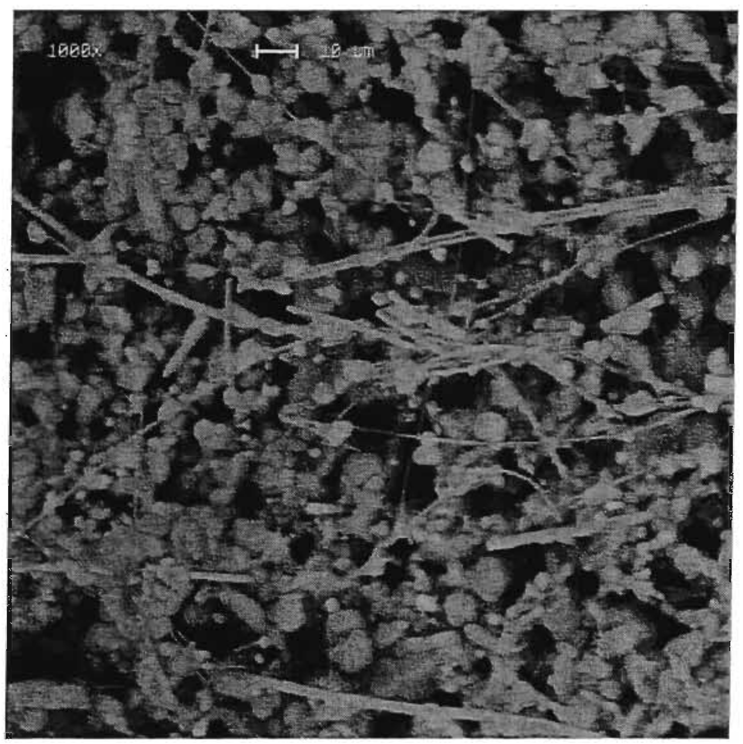


Figure 2. Image of as-received filter with particulate observed on sample 200 Run 4 (623964).

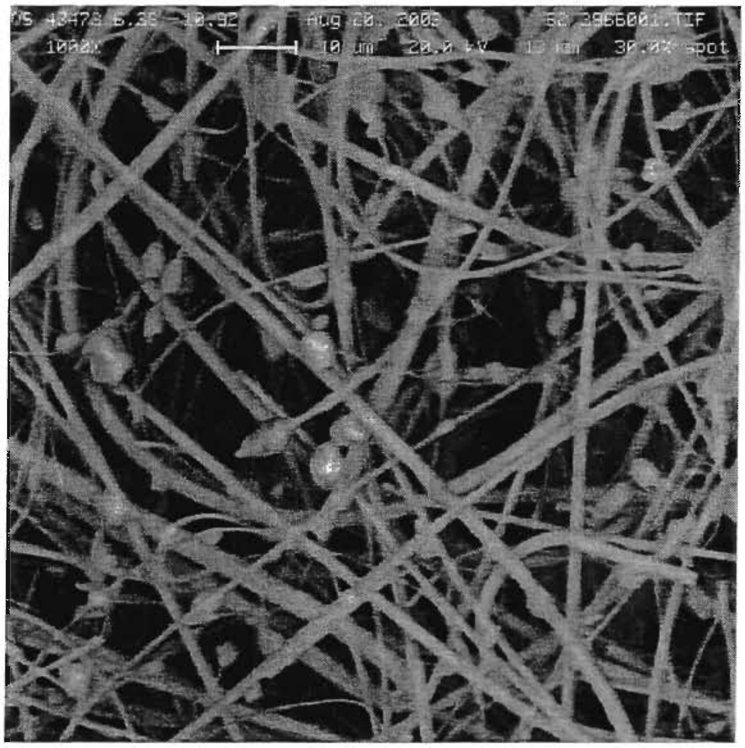


Figure 3. Image of as-received filter with particulate observed on sample 225 Run 6 (623966).

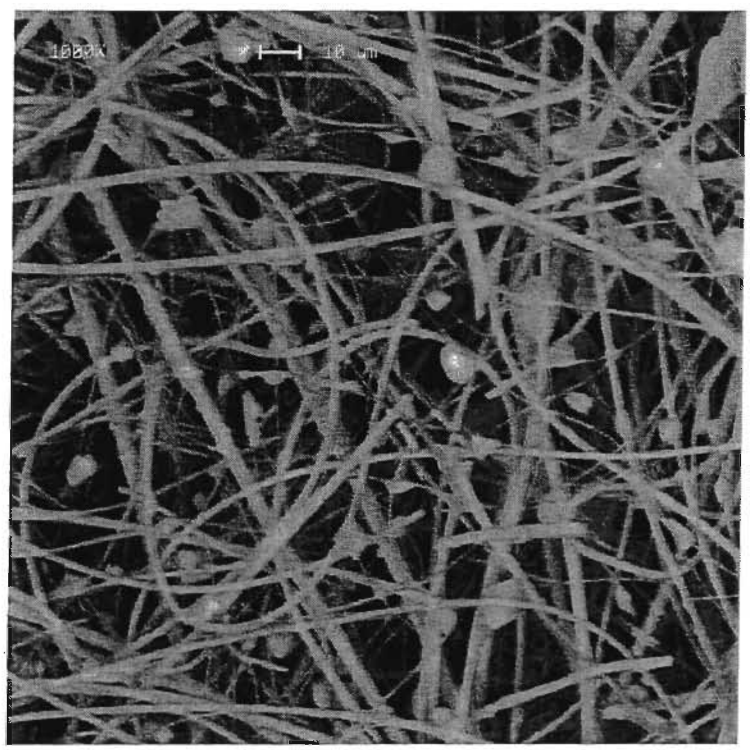


Figure 4. Image of as-received filter with particulate observed on sample 225 Run 6 (623966).

COMPLIANCE ASSURANCE MONITORING PLAN
(CAM PLAN)

FOR

Rayonier, Inc.

Fernandina Beach, Florida

Dissolving Sulfite Pulp Mill

September 30, 2003

TABLE OF CONTENTS

LIST OF ATTACHMENTS

1. **Table A**
2. **Specifications for the AMETEK Thermox Oxygen Monitor**
3. **Specification for Beta Gauge Particulate Monitor**
   - **MSI BetaGuard® PM**
   - **The MSI BetaGuard® PM**
   - **Beta Gauge Particulate Monitoring – Theory and Practice**

I. EMISSION UNITS REQUIRING CAM PLANS

A. Cam Rule Applicability Definition

Title V of the Clean Air Act Amendments of 1990 mandated a new permit program now referred to as Title V Permitting. Title V Permits were not to require additional emission limits. However these permits were to enumerate all applicable requirements and to establish a monitoring program to track compliance with all the applicable requirements. The monitoring must conform to the applicable requirement in form and averaging time and provide the basis for the annual certification of compliance.

EPA adopted rules governing these monitoring programs in 40 CFR Part 64. The monitoring required is referred to as Compliance Assurance Monitoring (CAM) and the Plans required are referred to as CAM Plans.

CAM Plans are required of all Title V permitted emission units using air pollution control equipment to meet emission limits (applicable requirements) if "before-control" emissions are greater than that level defining a major source, unless the source is specifically exempt.

Exempted emissions units include those with stratospheric ozone protection and acid rain requirements and those with other caps are included in the Title V Permit. Also exempted are all emission units subject to NSPS (40 CFR Part 60) and NESHAP (40 CFR Part 63) promulgated after 11/15/1990, as these sources have equivalent monitoring requirements included as part of the standard.

B. Fernandina Mill Emissions Units Requiring Cam Plans

The Fernandina mill has a Title V permit that expires May 5, 2003. Pursuant to 40 CFR Part 64 CAM Plans must be submitted with the permit renewal application. The required CAM provisions must be addressed in the Plan and included with the renewed permit.

Emission units at the Fernandina Mill have been examined and those Units to which the CAM Rule applies have been determined. This analysis has been conducted by emission unit and by pollutant because the CAM rule applies to each pollutant emitted in amounts greater than that amount which defines the unit as a major source. Generally this amount is 100 tons per year for the Fernandina Mill.

The following sources have "before-control" emissions greater than 100 tons per year, have emission limits in the Title V Permit and rely on equipment to achieve the permit limit.

Emissions Unit	Pollutant	Applicable Requirement	Max Potential Emission TPY	Control Equipment
No. 1 Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(A)(4)	70.0	Standard variable throat venturi scrubber
No. 2 Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(B)(4)	212.5	Standard variable throat venturi scrubber
No. 3 Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(C)(4)	212.6	Standard variable throat venturi scrubber
Recovery Boiler	Particulate	Title V Operating Permit 0890004-005-AV, Condition III(E)(4)	295.6	Fiber type mist eliminator.

Other emission limitations apply to the Fernandina Mill, but these are not subject to the CAM rule:

1. The sulfur dioxide emissions from power boilers Nos. 1, 2 and 3 are limited based on 2.5 percent sulfur oil. While the sulfur dioxide emissions from each boiler exceed 100 tons per year, no control equipment is used to meet this limitation.

2. Many sources have opacity limitations. Since opacity is not emitted in terms of tons per year it is not a pollutant that is directly subject to the CAM rule. Opacity monitoring may be used to monitor compliance with a particulate emission standard. However, since the

stacks subject to CAM for particulate matter at the Fernandina Mill have wet scrubbers, opacity is not used as a surrogate for particulate matter.

3. It is very difficult to estimate fugitive particulate emissions from the Molten Sulfur Handling System. But this system does emit particulate and this emission is controlled by work practices required in the regulation. The Cam Rule does not apply to the Molten Sulfur Handling System because there is no control equipment used to meet a specified emission limit. Also the emissions are expected to be much less than 100 tons per year.

C. Use of Surrogate Parameters in this Plan to Monitor Compliance.

A CAM Plan for this facility is required only for particulate emissions. There is no continuous particulate monitor available on the market. Thus the use of various particulate control equipment parameters must be used. Generally, several operating conditions are included when selecting control equipment parameters ranges. Ranges are chosen with a margin of safety for all operating conditions and that margin of safety may be considerably larger for certain of those operating conditions. Therefore, just because the surrogate parameter is out of range does not necessarily mean the permit limit is being exceeded. But since the ranges are generally selected conservatively, i.e. under worst case conditions, operating within the ranges assures compliance with the permit limits.

True

II. PARTICULATE EMISSIONS FROM NO. 1 BOILER

A. *Emissions Unit Identification*

This Emission Unit is a #6 oil fired water tube boiler with a maximum heat input rate of 185 mmBTU per hour. The emissions from this boiler pass through "A" venturi scrubber along with the emissions from No. 2 boiler. No. 1 Boiler is Emission Unit ID No. 001 and designated B1 in the Title V permit for the Fernandina Mill.

B. *Applicable Regulation, Emissions Limits, and Monitoring Requirements*

In Air Operating Permit AO45-183504 particulate emissions were limited to 16.0 lb./hr. Subsequently Rayonier asked for an increase in operating rate from a heat input of 160 mmBTU per hour to 185 mmBTU/hr. However, it intended that this increase in heat rate not increase calculated emissions, thereby avoiding PSD permitting. Consequently the emission rate decreased from 0.1 lbs./mmBTU to 0.086 lbs./mmBTU, but the mass emission rate remained at 16.0 lbs./hr and 70 tons per year, as is contained in Title V permit [0890004-005-AV] Condition III(A)(4).

C. *Control Technology Description*

The emissions from this #6 oil fired boiler pass up through a standard venturi scrubber using pH controlled wastewater as the scrubbing media. The pH control reduces corrosion of the venturi scrubber body. Particulate emissions control is set by the effectiveness of the venturi scrubber and the combustion efficiency of the boiler. Oxygen meters and other operational instruments monitor the boiler combustion efficiency. The venturi scrubber effectiveness is determined by the pressure drop across the venturi and the volume of liquid recycled through the venturi nozzles.

D. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
Indicator	**Venturi Pressure Differential.**	**Venturi Recycle Flow Rate**	**Oxygen Meter**
Measurement Approach	A differential pressure meter [Rosemont Model 3051 dp] is used to measure the pressure drop.	An orifice plate with differential pressure taps provides the flow rate. A differential pressure meter [Rosemont Model 3051 dp] is used to measure the pressure drop across the orifice plate.	An Ametek Thermox Model WDG-HPIIC Oxygen Monitor using an electrochemical cell.
Indicator Range	The indicator range is a minimum inches of water pressure differential for a running one-hour average as defined in Table A based on the ratio of oil and bark burned.	The indicator range is a minimum flow for a running one-hour average when using recycled water and a different flow for a running one-hour average when using fresh water. See Table A	The indicator range is a minimum % excess oxygen for a running one-hour average as defined in Table A.
Data Represen-tativeness	The pressure sensors are installed on either side of the venturi and directly measure the difference in pressure of the gas at those locations.	The pressure sensors are installed on either side of the orifice and directly measure the difference in pressure of the water at those locations.	The gas sample is taken directly out of the boiler utilizing convection. Since it is a gas sample, it should be completely representative of boiler combustion conditions.
Verification of Operational Status	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced.	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced.	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced. The meter is accurate to within 0.05% O2.

	Indicator No. 1	Indicator No. 2	Indicator No. 3
QA/QC Practices and Criteria	The meter is set-up on the mill's preventative maintenance system for transmitter calibrations.	The meter is set-up on the mill's preventative maintenance system for transmitter calibrations.	The meter is calibrated monthly against a standard O2 span gas.
Monitoring Frequency	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.
Data Collection Procedures	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.

E. Justification

1. Background

Particulate emissions are controlled by the venturi scrubber [A scrubber] provided for this boiler and No. 2 power boiler. Established combustion controls are provided for the boiler itself. To monitor the particulate emissions affected by the boiler combustion controls and the venturi scrubber operation, an oxygen meter, venturi recirculation flow meter and venturi differential pressure meter are used. Technical specifications for the oxygen meter are attached.

2. Rationale for Selection of Performance Indicators

Particulate testing indicate that the parameters selected will verify good control of the boilers and the scrubber.

The gases from this boiler pass through a standard variable throat venturi scrubber. The EPA Engineering Manual and standard engineering design practices for such scrubbers use liquid media flow and gas pressure drop across the unit as measures of effectiveness. The Model CAM Plan Guidance from EPA and recent MACT standards where the required monitoring must comply with the CAM rule, for venturi scrubbers use liquid media flow rate and gas pressure drop as the surrogates.

In this CAM Plan Rayonier has recognized that an additional parameter is needed to determine that the source is not overloading the scrubber. Periods of poor combustion could increase particulate loading beyond scrubber capability. Oxygen concentration was chosen as the surrogate parameter for good combustion because it was already being monitored and correlated well to particulate.

3. Rationale for Selection of Indicator Ranges

The indicator ranges were selected through comparing the indicators to actual EPA method 5 tests. Alarms below the upper limit are provided for hourly averages as well as instantaneous test results. Most stack tests on which the ranges are based were conducted while both boilers were operating. This provides the maximum particulate loading and gas flow for the scrubber to handle. Thus it would represent worst-case conditions. See the discussion under Section III.E.3 for boiler No. 2 for the justification of the surrogate parameters for the combined flow operation.

III. PARTICULATE EMISSIONS FROM NO. 2 BOILER

A. Emissions Unit Identification

This Emission Unit is a combination #6 oil and wood waste (bark) fired water tube boiler with a maximum heat input rate of 184 mmBTU per hour on oil and 218 mmBTU per hour on wood waste. The emissions from this boiler pass through "A" venturi scrubber along with the emissions from No. 1 boiler. No. 2 Boiler is Emission Unit ID No. 002 and designated B2 in the Title V permit for the Fernandina Mill.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

In Air Operating Permit AO45-183504 particulate emissions were limited to 50.6 lb. PM/hr. Subsequently Rayonier asked for an increase in operating rate from a heat input of 180 mmBTU per hour to 218 mmBTU per hour. However, it intended that this increase in heat rate not increase calculated emissions, thereby avoiding PSD permitting. Consequently the emission rate decreased from 0.280 lbs./mmBTU to 0.230 lbs./mmBTU for wood waste burning, but the mass emission rate remained at 50.6 lbs./hr and 212.5 tons per year, as is contained in Title V permit [0890004-005-AV] Condition III(B)(4). For oil the particulate matter emission rate limits are 15.2 lb./hr. and 63.9 tons per year.

C. Control Technology Description

The emissions from this boiler pass up through a standard venturi scrubber using pH-controlled water as the scrubbing media. The pH control reduces corrosion of the venturi scrubber body. Particulate emissions control is set by the effectiveness of the venturi scrubber and the combustion efficiency of the boiler. Oxygen meters and other operational instruments monitor the boiler combustion efficiency. The pressure drop determines the venturi scrubber effectiveness across the venturi and the volume of liquid recycled through the venturi nozzles.

D. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
Indicator	**Venturi Pressure Differential.**	**Venturi Recycle Flow Rate**	**Oxygen Meter**
Measurement Approach	A differential pressure meter [Rosemont Model 3051 dp] is used to measure the pressure drop.	An orifice plate with differential pressure taps provides the flow rate. A differential pressure meter [Rosemont Model 3051 dp] is used to measure the pressure drop across the orifice plate.	An Ametek Thermox Model WDG-HPIIC Oxygen Monitor using an electrochemical cell.
Indicator Range	The indicator range is a minimum inches of water pressure differential for a running one-hour average as defined in Table A based on the ratio of oil and bark burned.	The indicator range is a minimum flow for a running one-hour average when using recycled water and a different flow for a running one-hour average when using fresh water. See Table A	The indicator range is a minimum % excess oxygen for a running one-hour average as defined in Table A.
Data Represen-tativeness	The pressure sensors are installed on either side of the venturi and directly measure the difference in pressure of the gas at those locations.	The pressure sensors are installed on either side of the orifice and directly measure the difference in pressure of the water at those locations.	The gas sample is taken directly out of the boiler utilizing convection. Since it is a gas sample, it should be completely representative of boiler combustion conditions.
Verification of operational Status	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced.	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced.	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced. The meter is accurate to within 0.05% O2.
QA/QC Practices and Criteria	The meter is set-up on the mill's preventative maintenance system for transmitter calibrations.	The meter is set-up on the mill's preventative maintenance system for transmitter calibrations.	The meter is calibrated monthly against a standard O2 span gas.

	Indicator No. 1	Indicator No. 2	Indicator No. 3
Monitoring Frequency	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.
Data Collection Procedures	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.

E. Justification

1. Background

Particulate emissions are controlled by the venturi scrubber [A scrubber] provided for this boiler and No. 1 power boiler. Established combustion controls are provided for the boiler itself. To monitor the particulate emissions affected by the boiler combustion controls and the venturi scrubber operation, an oxygen meter, venturi recirculation flow meter and venturi differential pressure meter are used. Technical specifications for the oxygen meter are attached.

2. Rationale for Selection of Performance Indicators

Particulate testing indicate that the parameters selected will verify good control of the boilers and the scrubber.

The gases from this boiler pass through a standard variable throat venturi scrubber. The EPA Engineering Manual and standard engineering design practices for such scrubbers use liquid media flow and gas pressure drop across the unit as measures of effectiveness. The Model CAM Plan Guidance from EPA and recent MACT standards where the required monitoring must comply with the CAM rule, for venturi scrubbers use liquid media flow rate and gas pressure drop as the surrogates.

In this CAM Plan Rayonier has recognized that an additional parameter is needed to determine that the source is not overloading the scrubber. Periods of poor combustion could increase particulate loading beyond scrubber capability. Oxygen concentration was chosen as the surrogate parameter for good combustion because it was already being monitored and correlated well to particulate.

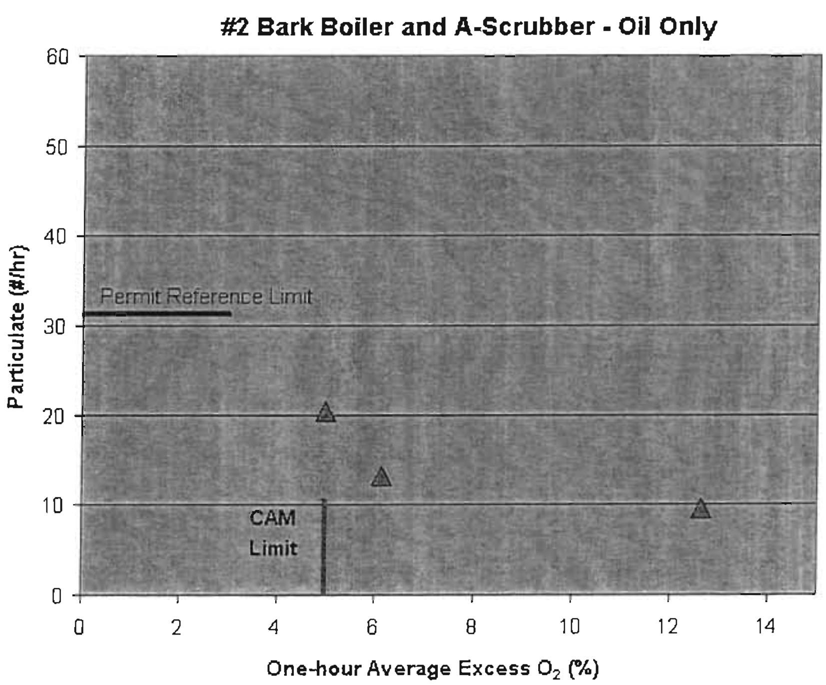
3. Rationale for Selection of Indicator Ranges

The indicator ranges were selected through comparing the indicators to actual EPA method 5 tests. Alarms below the upper limit are provided for hourly averages as well as instantaneous test results.

A series of stack tests using EPA Method 5 were completed under varying liquid media flow rates and gas pressure drops and oxygen levels. Most of these tests were run while both No. 1 and No. 2 boilers were operating. This provides the maximum loading to A scrubber through which they usually vent. The Table below presents the summarized data for the 10 stack test runs used to define the surrogate ranges for A scrubber. These tests and others are provided in the attached test report provided by Capstone Technology Corporation in the memo from Ron B Aldus to Dick Hopper dated June 03, 2003. Note that none of the tests used to determine the ranges exceeded 85% of the standard. Since this scrubber can be fed either water or filtrate both scrubbing media were tested. Through testing it was determined that filtrate provided higher particulate likely due to the dissolved solids that carried over in the scrubber plume. Thus the ranges were based on filtrate stack tests. However, a set of tests were also run to verify that the scrubber can be operated at low flow rates on fire water should that be necessary due to a scrubber circulation pulp failure.

Test #	Flow gpm	DP H_2O	Fuels	% of limit	Liquid Media
C1	1900	14.1	bark/oil	61	filtrate
C2	1892	14.1	bark/oil	62	filtrate
C3	1889	14.1	bark/oil	71	filtrate
A6	2041	14.4	bark/oil	83	filtrate
A7	2068	14.5	bark/oil	70	filtrate
A8	2074	14.5	bark/oil	85	filtrate
A4	1548	13.2	bark	59	filtrate
A5	407	8.7	bark	29	filtrate
A7	1481	12.6	bark/oil	31	filtrate
A9	2020	14.7	oil	71	filtrate

In separate testing the excess oxygen level where each boiler started to exhibit poor combustion was determined. Generally less than 3.0% excess air the boiler generally started to exhibit poor combustion. However, No. 2 boiler on oil needed more excess air to maintain good combustion. See the graph below which is reproduced from the June 03, 2003 memo from Capstone referenced above.



IV. PARTICULATE EMISSIONS FROM NO. 3 BOILER

A. Emissions Unit Identification

This Emission Unit is a combination #6 oil and wood waste (bark) fired water tube boiler with a maximum heat input rate of 207 mmBTU per hour on oil and 245 mmBTU per hour on wood waste. The emissions from this boiler pass through "B" venturi scrubber. No. 3 Boiler is Emission Unit ID No. 003 and designated B3 in the Title V permit for the Fernandina Mill.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

In Air Operating Permit AO45-183504 particulate emissions were limited to 50.6 lb. PM/hr. Subsequently Rayonier asked for an increase in operating rate from a heat input of 180 mmBTU per hour to 245 mmBTU per hour. However, it intended that this increase in heat rate not increase calculated emissions, thereby avoiding PSD permitting. Consequently the emission rate decreased from 0.280 lbs./mmBTU to 0.207 lbs./mmBTU for wood waste burning, but the mass emission rate remained at 50.6 lbs./hr and 212.6 tons per year, as is contained in Title V permit [0890004-005-AV] Condition III(C)(4). For oil the particulate matter emission rate limits are 16.7 lb./hr. and 70.1 tons per year.

C. Control Technology Description

The emissions from this boiler pass up through a standard venturi scrubber using pH-controlled water as the scrubbing media. The pH control reduces corrosion of the venturi scrubber body. Particulate emissions control is set by the effectiveness of the venturi scrubber and the combustion efficiency of the boiler. Oxygen meters and other operational instruments monitor the boiler combustion efficiency. The venturi scrubber effectiveness is determined by the pressure drop across the venturi and the volume of liquid recycled through the venturi nozzles.

D. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
Indicator	**Venturi Pressure Differential.**	**Venturi Recycle Flow Rate**	**Oxygen Meter**
Measurement Approach	A differential pressure meter [Rosemont Model 3051 dp] is used to measure the pressure drop.	An orifice plate with differential pressure taps provides the flow rate. A differential pressure meter [Rosemont Model 3051 dp] is used to measure the pressure drop across the orifice plate.	An Ametek Thermox Model WDG-HPIIC Oxygen Monitor using an electrochemical cell.
Indicator Range	The indicator range is a minimum inches of water pressure differential for a running one-hour average as defined in Table A based on the ratio of oil and bark burned.	The indicator range is a minimum flow for a running one-hour average when using recycled water and a different flow for a running one-hour average when using fresh water. See Table A	The indicator range is a minimum % excess oxygen for a running one-hour average as defined in Table A.
Data Representativeness	The pressure sensors are installed on either side of the venturi and directly measure the difference in pressure of the gas at those locations.	The pressure sensors are installed on either side of the orifice and directly measure the difference in pressure of the water at those locations.	The gas sample is taken directly out of the boiler utilizing convection. Since it is a gas sample, it should be completely representative of boiler combustion conditions.
Verification of operational Status	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced.	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced.	Alarms are set at levels outside the normal operating range to alert the operators and have the meter serviced. The meter is accurate to within 0.05% O2.
QA/QC Practices and Criteria	The meter is set-up on the mill's preventative maintenance system for transmitter calibrations.	The meter is set-up on the mill's preventative maintenance system for transmitter calibrations.	The meter is calibrated monthly against a standard O2 span gas.

	Indicator No. 1	Indicator No. 2	Indicator No. 4
Monitoring Frequency	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.	This is a continuous monitor. The operator has instantaneous and running hourly average readouts and alarms.
Data Collection Procedures	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.	The meter provides input on a second-by-second basis. About once each month these data are downloaded, consolidated into 15-minute averages and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.	15-minute averages are stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements. A running one-hour average is used for compliance.

E. *Justification*

1. Background

Particulate emissions are controlled by the venturi scrubber [B scrubber] provided for this boiler. Established combustion controls are provided for the boiler itself. To monitor the particulate emissions affected by the boiler combustion controls and the venturi scrubber operation, an oxygen meter, venturi recirculation flow meter and venturi differential pressure meter are used. Technical specifications for the oxygen meter are attached.

2. Rationale for Selection of Performance Indicators

Particulate testing indicate that the parameters selected will verify good control of the boilers and the scrubber.

The gases from this boiler pass through a standard variable throat venturi scrubber. The EPA Engineering Manual and standard engineering design practices for such scrubbers use liquid media flow and gas pressure drop across the unit as measures of effectiveness. The Model CAM Plan Guidance from EPA and recent MACT standards where the required monitoring must comply with the CAM rule, for venturi scrubbers use liquid media flow rate and gas pressure drop as the surrogates.

In this CAM Plan Rayonier has recognized that an additional parameter is needed to determine that the source is not overloading the scrubber. Periods of poor combustion could increase particulate loading beyond scrubber capability. Oxygen concentration was chosen as the surrogate parameter for good combustion because it was already being monitored and correlated well to particulate.

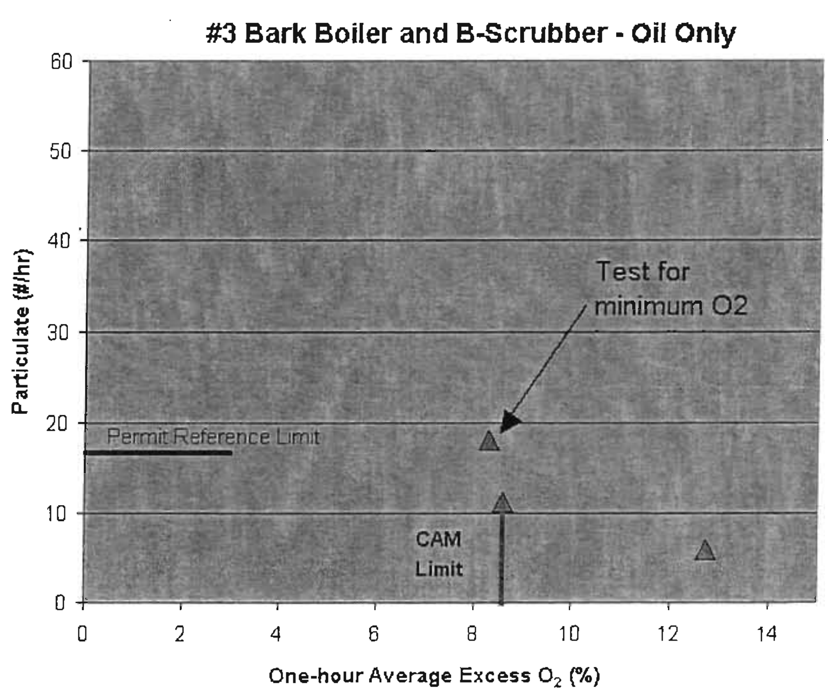
3. Rationale for Selection of Indicator Ranges

The indicator ranges were selected through comparing the indicators to actual EPA method 5 tests. Alarms below the upper limit are provided for hourly averages as well as instantaneous test.

A series of stack tests using EPA Method 5 were completed under varying liquid media flow rates and gas pressure drops and oxygen levels. The Table below presents the summarized data for the 7 tests used to define the surrogate ranges for B scrubber. These tests and others are provided in the attached test report provided by Capstone Technology Corporation in the memo from Ron Baldus to Dick Hopper dated June 03, 2003. Note that none of the tests used to determine the ranges exceeded 51% of the standard. The boiler had at least 3.0 excess oxygen during all tests. As noted elsewhere, this scrubber can be fed either water or filtrate. Through testing it was determined that filtrate provided higher particulate due to the dissolved solids that carried over in the scrubber plume. Thus the ranges were based on stack tests when filtrate was the scrubbing media. However, a set of tests were run to verify that the scrubber can be operated at low flow rates on fire water should that be necessary if a scrubber circulation pump fails.

Test #	Flow gpm	DP H_2O	Fuels	% of limit	Liquid Media
B1	1825	12.3	bark	51	filtrate
B2	1831	12.4	bark	35	filtrate
B4	1676	10.8	bark	36	filtrate
B5	1675	10.8	bark	33	filtrate
B6	250	6.1	bark	51	filtrate
B7	1654	10.8	bark/oil	33	filtrate
B3	1380	9.8	bark	46	filtrate

In separate testing the excess oxygen level where each boiler started to exhibit poor combustion was determined. Generally less than 3.0% excess air the boiler generally started to exhibit poor combustion. However, No. 3 boiler on oil needed more excess air to maintain good combustion. See the graph below which is reproduced from the June 03, 2003 memo from Capstone referenced above.



V. PARTICULATE EMISSIONS FROM RECOVERY BOILER

A. Emissions Unit Identification

Emission Unit ID No. 6 in the Title V Permit is a sulfite recovery boiler. This boiler burns evaporated spent cooking liquor. Liquor used to remove unwanted portions of the wood chip contains sugars, tannins and combined lignins. Evaporation concentrates this organic portion of the liquor to the point it will sustain combustion when fired into the recovery boiler. Steam generated by the recovery boiler is used for electricity generation and process purposes. The evaporated liquor contains sulfur compounds, which are converted to sulfur dioxide during combustion. This sulfur dioxide is captured in a scrubber using ammonium hydroxide scrubbing media producing ammonium bisulfite that is recycled as fresh cooking liquor. Sulfur dioxide also reacts with ammonium hydroxide to produce ammonium sulfate and ammonium bisulfite. All of these ammonium compounds are dissolved in the carryover droplets from the scrubber. Reducing the emission of droplets reduces the particulate emissions. There is little ash in the liquor and little unburned carbon that would color the recovered ammonium bisulfite cooking liquor. The ammonium sulfate formed as a co-product in the liquid droplets carried over is the predominate source of particulate. Capturing droplets carried over from the scrubber is accomplished by a Brinks mist eliminator, described below.

B. Applicable Regulation, Emissions Limits, and Monitoring Requirements

The Reasonably Available Control Technology (RACT) determination for this source is dated 7/12/76 and is based on State of Washington Sulfite Pulp Mill Rules. The consent order history was through OGC Case No. 90-0332, DOAH Case 90-2153, Air Construction permit 0890004-001-AC, Air Operations permit 0890004-003-AO and Florida Rule 62-212.400(6). The particulate emission requirement is presently part of Operating Permit No. 0890004-005-AV, condition No. .4. This Emission Limitation is that the particulate emission not exceed 2.5 pounds per ton of air dried unbleached pulp or 67.5 pounds per hour.

C. Control Technology Description

The combustion process produces very small amount of soot from incomplete combustion in the boiler. As described above, a scrubber is installed after this boiler to recover sulfur dioxide used as the active ingredient in the cooking liquor. A small portion of the sulfur dioxide and ammonium hydroxide react to form ammonium sulfate instead of the preferred ammonium bisulfite. A portion of the ammonium sulfate formed is emitted by the boiler as a fume. All the exhaust gases pass through a Brinks mist eliminator which mechanically captures the fume.

A Brinks mist eliminator is comprised of a series of tubes wrapped in fiberglass or polyester fiber bats, through which the exhaust gases from the scrubber must pass. The fibers filter out the droplets of scrubber media carried over and drain to a tank leading to evaporator feed so that another attempt can be made to recover the sulfur. This also reduces the ammonia sewered, which aids in reducing ammonia discharged to the Amelia River.

D. *Monitoring Approach*

	Indicator No. 1
Indicator	Particulate concentration via an extractive beta gauge particulate monitor.
Measurement Approach	The monitoring system isokinetically collects a sample of particulate on to a filter tape and compares the amount of radiation absorbed with the sample and without the sample on the tape. The instrument readout can be converted to particulate concentration. The concentration can then be calibrated against EPA Method 5 particulate tests.
Indicator Range	The indicator range is based on EPA Method 5 testing. The range the present testing indicates is within permit limits is any Beta Gauge reading calibrated to concentration where the indicated concentration is less than 66 mg/dscm.
Data Representativeness	The system is designed to collect a representative sample, which is repeatable as compared to Method 5. This has been verified and the sampling system will not be altered. The sample size on the tape can be controlled by the pressure drop across the tape or by timer.
Verification of operational Status	Each sample step provides a physical zero. The beta absorption using the C-14 source is virtually independent of the chemical composition, size or color of the collected particulate and shows no interference from water droplets or fogging in the stack. As a result there is no need for site-specific reference calibration.

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	Indicator No. 1
QA/QC Practices and Criteria	As noted above there is a zero for each sample taken. In addition there is a monthly automatic beta calibration. This checks the repeatability of the Beta gauge measurement component of the instrument system by performing a zero check, a span check and a filter tape positioning check. At the same time there is a automatic flow calibration. This checks repeatability of the flow meter components of the instrument system by routing the same flow through all of the flow meters at two separate flow set points to perform a low span and a high span check.
Monitoring Frequency	There will be a particulate value provided at least every 15 minutes except for the monthly 30-minute calibrations.
Data Collection Procedures	The monitor is queried once each minute and the latest value is stored on a server with other process data. About once each month this data will be downloaded, consolidated into 15-minute averages, and stored in an Environmental Data Management Database.
Averaging Period	15-minute averages will be stored for 5 years to comply with the CAM Rule and Title V record-keeping requirements.

E. Justification

1. Background

There are few methods available for continuously, or semi-continuously, determining mass particulate emissions. Historically, opacity or light transmissivity through the plume has been used as a surrogate. But the particulate involved for this emission is ammonium sulfate which has a very high reflectance and is difficult for opacity monitors to measure. For certain types of combustion, the blackness, or shade of gray, of the plume was used as an indication of soot and therefore particulate emissions. But this is a white plume and not caused by incomplete combustion. Sources employing wet scrubbing technologies can sometimes relate liquid media flow and pressure drop to mass particulate emission. Liquid scrubbers emit saturated plumes and the condensing water droplets interfere with the opacity measurements. However, the scrubber on this recovery boiler is to remove heat and sulfur dioxide and has no impact on particulate control.

Efforts to find a surrogate parameter using other equipment operating parameters failed. A method found that has worked is based on measuring the beta particle attenuation from particulate collected on a filter paper. A small radioactive beta source is used. A baseline measurement of beta radiation passing through a clean portion of a fiberglass tape is taken. The tape is moved to a position where a gas stream sample from the stack gases is passed through the filter tape. This sample is taken isokinetically from the stack gases to avoid biasing the size particulate sampled. The tape filters out particles down to about 0.3 micron in size. After filtering out the particulate in the gas stream the beta ray attenuation across the sampled area on the tape is measured again. The difference is used to relate to the quantity of particulate in the gas stream sampled.

2. Rationale for Selection of Performance Indicators

The attenuation of beta radiation is related to the thickness of the material. Beta gauges have been used for a long time to measure thickness of various thin materials with great accuracy. In this application the thickness of a paper filter is measured before and after being used to filter stack gases containing particulate. Testing has verified that the thickness of particulate buildup on paper used to filter stack gases is related to the particulate in the stack.

3. Rationale for Selection of Indicator Ranges

A series of Method 5 stack tests at different operating rates were performed, while simultaneously measuring the beta gauge output. The attenuation of beta particles due to the particulate left on the paper has been calibrated in terms of stack concentration. The following graph presents the correlation of beta attenuation estimate of stack gas concentration. This approach elected to use only the in-stack concentration to relate to the permit limit which is in mass flow units (lbs/hour) because all testing used for the calibration was during periods of the maximum expected flow rate. Thus this concentration selected is the greatest that could be tolerated without a permit exceedance at the highest expected flow rate. The stack gas flow rate decreases during other operating conditions, such as when less liquor is fired, because less oxygen is needed and less gaseous products of combustion are generated. Using this maximum concentration range during these lower stack gas flow periods only provides greater assurance the particulate limit is not exceeded. The graph below present the test data available to date and demonstrates that the correlation between stack gas particulate concentration and particulate mass flow is excellent. All these tests were run at approximately the same gas flow rate. The higher concentrations on this graph were obtained by bypassing a small slip stream around the control device (the Brinks), while the boiler operated at essentially at the same rate and therefore the same stack flow rate.

Using the correlation equation from the graph of the stack test data below, a beta guard monitor concentration reading of less than 66 mg/scm indicates the particulate emissions are in compliance at less than 67.5 lb/hr. any excursion = exceedance.

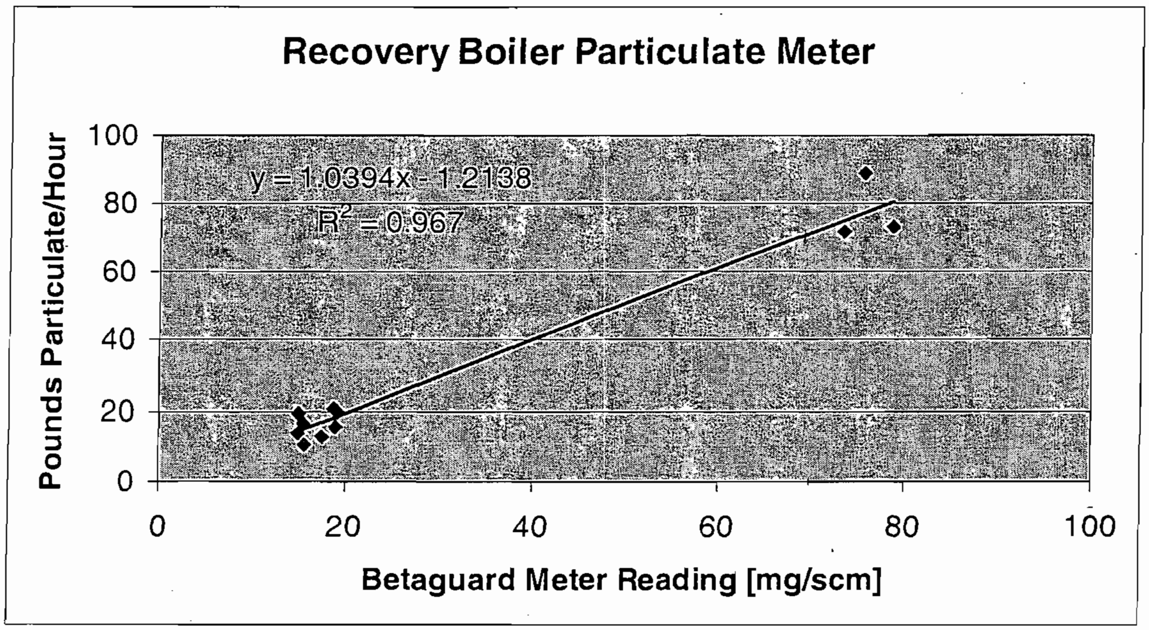


Table A

Compliance Assurance Monitoring — CAM LIMITS

This Table provides the operating limits which assure compliance during normal operating conditions.

With Normal Recycle Water Make-up	Hourly Average Differential Pressure [inches water]	Hourly Average Recirculation Flow Rate [gpm]
A Scrubber	>12.0	>1300
B Scrubber	>9.5	>1300
With Fresh Water Make-up	Except when the boilers are on only oil	
A Scrubber	>9.0	>380
B Scrubber	>6.0	>250

		Hourly Average Excess Oxygen [%]
No. 1 Power Boiler	Oil Only	>3.0
No. 2 Power Boiler	Oil Only	>5.0
No. 2 Power Boiler	Bark & Oil	>3.0
No. 2 Power Boiler	Bark Only	>3.0
No. 3 Power Boiler	Oil Only	>8.6
No. 3 Power Boiler	Bark & Oil	>3.0
No. 3 Power Boiler	Bark Only	>3.0

Abnormal Operations Include:

Fuel Transition When the fuel source is changed the hourly average will start averaging immediately for control, but will not be comparable to the CAM limit until a full hour has passed.

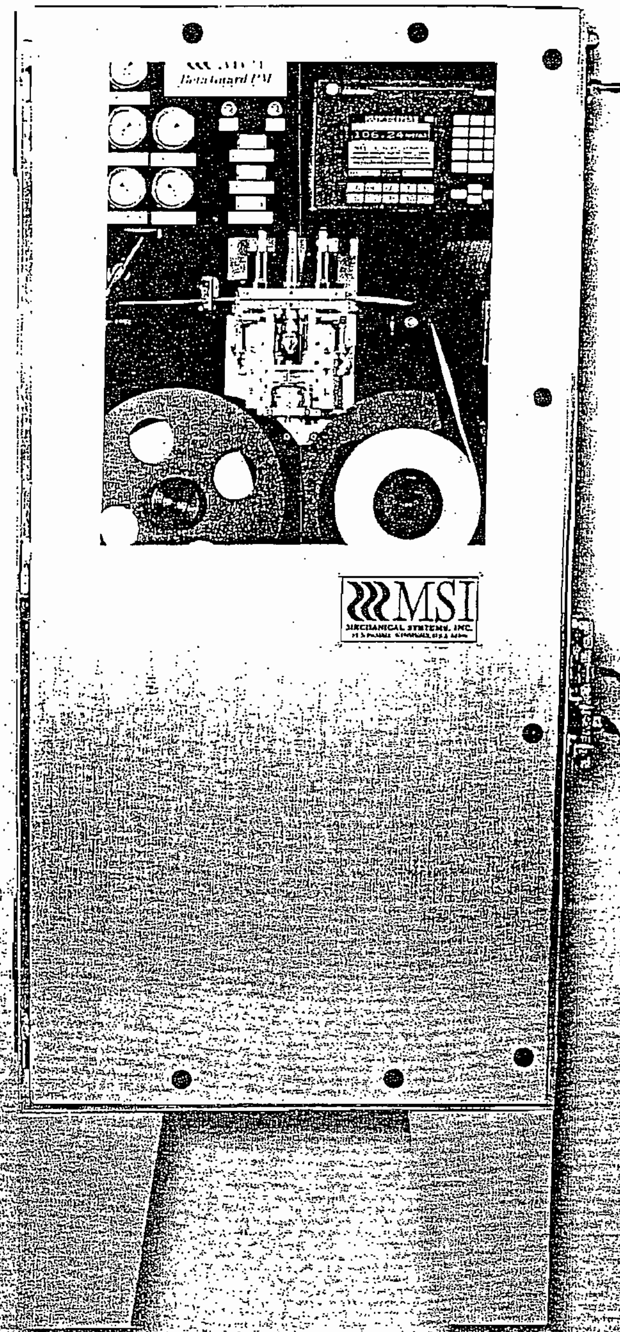
Cold Start-up When the boiler has been down for an extended period of time there is a warm-up curve for the boiler refractory. During this period [24 hours] the boiler should have low emissions but is subject to major upsets. The hourly averages will begin as soon as fuel is added to the boiler for control, but the CAM limits will not apply until the end of the 24 hours.

Defined Startup ?

Warm Start-up When the boiler is started up and a warm-up curve is not required there is a 6 hour period when the emissions should be low but the boiler is subject to upsets. The hourly averages will begin as soon as fuel is added to the boiler for control, but the CAM limits will not apply until the end of the 6 hours.

MSI

BetaGuard PM

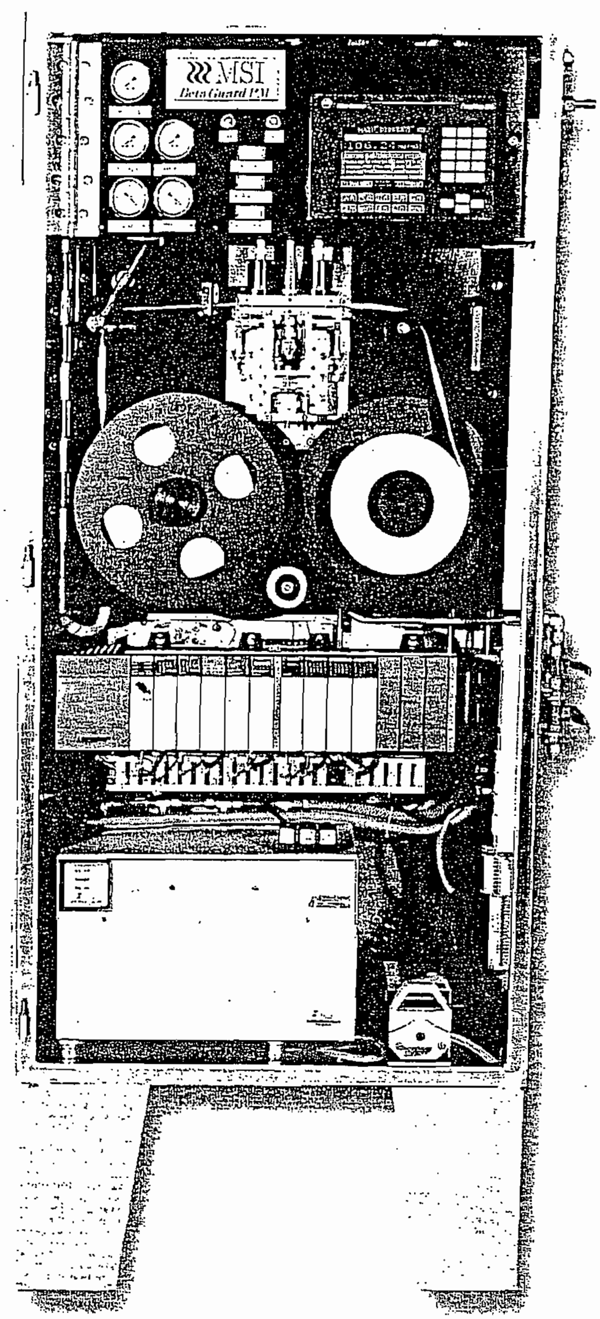


MSI BetaGuard PM Continuous Source Particulate Monitor

MADE IN

Description

The MSI BetaGuard PM beta gauge measures particulate emissions from all types of sources under all conditions. Stacks with changing particulate conditions (size, shape, color, density, composition) or varying operating parameters (flow rate, moisture concentration, temperature, pressure) are accurately measured. Wet basis, dry basis and process rate measurements are now available from a single instrument!



MSI BetaGuard PM

Applications

- Coal Fired Power Plants
- Cement Kilns
- Petroleum Refineries
- Hazardous Waste Incinerators
- Boiler Industrial Furnaces
- Municipal Waste Combustors

Capabilities

- Dual Beta Sensor Design
- Built-In Redundancy
- Dry Basis Measurement
- Wet Basis Measurement
- Process Rate Measurement
- Isokinetic Flow Sampling
- Isothermal Sampling

Certifications

- Method 5 Equivalence
- Method 5i Equivalence
- Method 17 Equivalence

Calibrations

- Seven Point Beta Characterization
- Seven Point Flow Characterization
- Automatic Daily Beta Calibration
- Automatic Daily Flow Calibration
- Quarterly Beta Audit
- Quarterly Flow Audit

Features

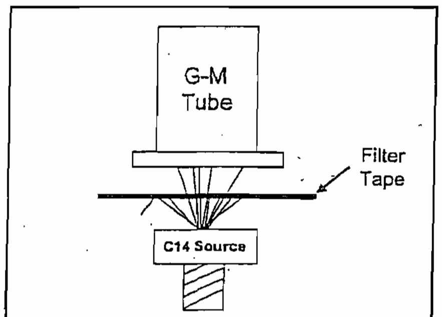
- NEMA 4X Construction
- Allen Bradley SLC 500 Control
- Heated Dilution Air
- Simplified Filter Tape Replacement
- Complete Alarms
- Complete Diagnostics
- Built-In Lightning Surge Protection
- 115 VAC Operation
- Manufactured in the U.S.A.

Options

- Remote Display and I/O to 10,000 Feet
- Outdoor Walk-In Enclosure
- Heavy Metals Monitoring Package
- Continuous Moisture Measurement

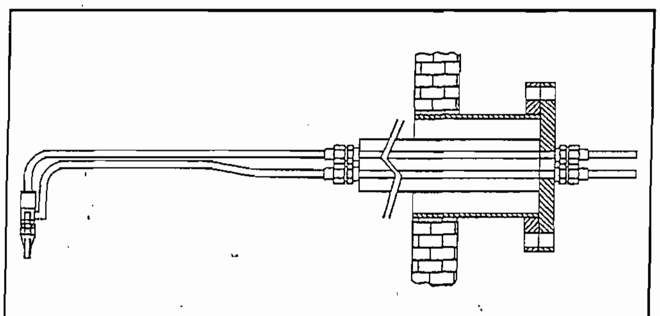
Principle of Operation

A low energy Carbon-14 source furnishes a constant supply of beta electrons which are detected by a Geiger-Mueller tube. A filter tape is interposed between the source and detector and the mass of the initial clean filter spot is recorded by measuring the counts of beta electrons reaching the G-M tube. This clean spot is then moved under a collection apparatus for sample extraction from the stack. A sample of stack gas is drawn through and deposits particulate on the filter tape. All particles above 0.1 microns (μ) are collected.



Beta Transmission Sensor Principle

Once a sufficient amount of sample is collected on the filter tape, the filter tape is moved back under the beta detector and remeasured. The difference in beta emission counts measured from the original clear spot to the collected sample is directly proportional to the mass on the tape.


BetaGuard PM Dilution Probe

The MSI BetaGuard PM extracts the sample isokinetically from the stack using a dilution probe to suppress moisture and increase sample transport velocity. During the time the mass is building up on the tape, the BetaGuard PM is measuring the sample volume extracted from the stack to produce that mass. Combining the collected mass with the drawn sample volume provides a measure of mass concentration.

The MSI BetaGuard PM measures the flow both wet and dry to provide mass concentration readings on both a wet and a dry basis.

BetaGuard PM Measures Accurately Under All Conditions Regardless Of:

Emission Control Technology

- Dry Electrostatic Precipitator
- Wet Electrostatic Precipitator
- Dry Scrubber
- Wet Scrubber
- Fabric Filter/Baghouse
- Quench Tower

Changes in Particle Properties

- Size
- Shape
- Color
- Chemical Composition
- Density

Changes in Stack Gas

- Velocity
- Water Vapor Content (Humidity)
- Pressure
- Temperature

Stack/Duct Construction

- Size
- Shape
- Internal Lining
- Materials of Construction

Equipment Changes Over Time

- Ball Mill/Pulverizer Wear
- ESP Degradation
- Fabric Filter Deterioration
- SO_3 Injection Rate
- Carbon Injection Rate

BetaGuard PM
General Specifications

Particulate Conc. Range (Selectable):	0 - 1000 mg/m^3
	0 - 0.5 grains/ft^3
Diluted Sample Flow Range:	0 - 3.5 m^3/hr, 0 - 60 l/min
	0 - 120 ft^3/hr
Minimum Batch Sampling Time:	140 seconds
Minimum Measurement Update Time:	6 minutes
Measurement Sources (2)	
Isotope:	Carbon-14
Activity:	<12 μCi
Half Life:	5700 years
Licensing:	None Required - Exempt
Measurement Detectors (2):	Geiger-Mueller (G-M) Tube
Filter Medium:	Glass Fiber, Low Heavy Metals
Digital I/O:	16 in / 16 out
Analog I/O:	10 in / 2 out
Warm-up Time:	30 minutes
Power Requirements	
Main Instrument:	115 Vac, 15 A max
Heated Sample Line:	115 Vac, 10 A max
Dilution Air Heater:	115 Vac, 6 A
Instrument Air Requirements:	80 psig, 6 scfm min
Dimensions:	72"h x 30"w x 12"d
Weight:	275 pounds
Environmental Rating:	NEMA 4X
	IP66
Operating Temperature:	50° - 120°F / 10° - 50°C
Storage Temperature:	-20° - 135°F / -30° - 60°C

MSI

MECHANICAL SYSTEMS, INC.
480 Progress Way
Sun Prairie, Wisconsin 53590
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Facsimile 608-825-2295

The MSI BetaGuard® PM

Principles of Operation of a Beta Gauge Particulate Monitor

The BetaGuard PM is an instrument for measuring the concentration of particulate matter in combustion exhaust. It operates by drawing a sample of exhaust from a probe through a piece of filter tape. The filter tape is made of a glass fiber mesh, similar to fiberglass, and traps any dust particles larger than 0.3 microns. A mass measuring sensor called a Beta Gauge measures the mass of the filter tape first when the filter is clean, and again when the filter is loaded with particles. The instrument subtracts the filter mass before and after loading to calculate the mass of the particles in milligrams (mg). The instrument also measures the flow of the stack sample gas in cubic meters (m^3) used to extract the sample, and calculates the particulate concentration by dividing the mass by the volume in units of mg per m^3. This process emulates USEPA Methods 5, 5i and 17.

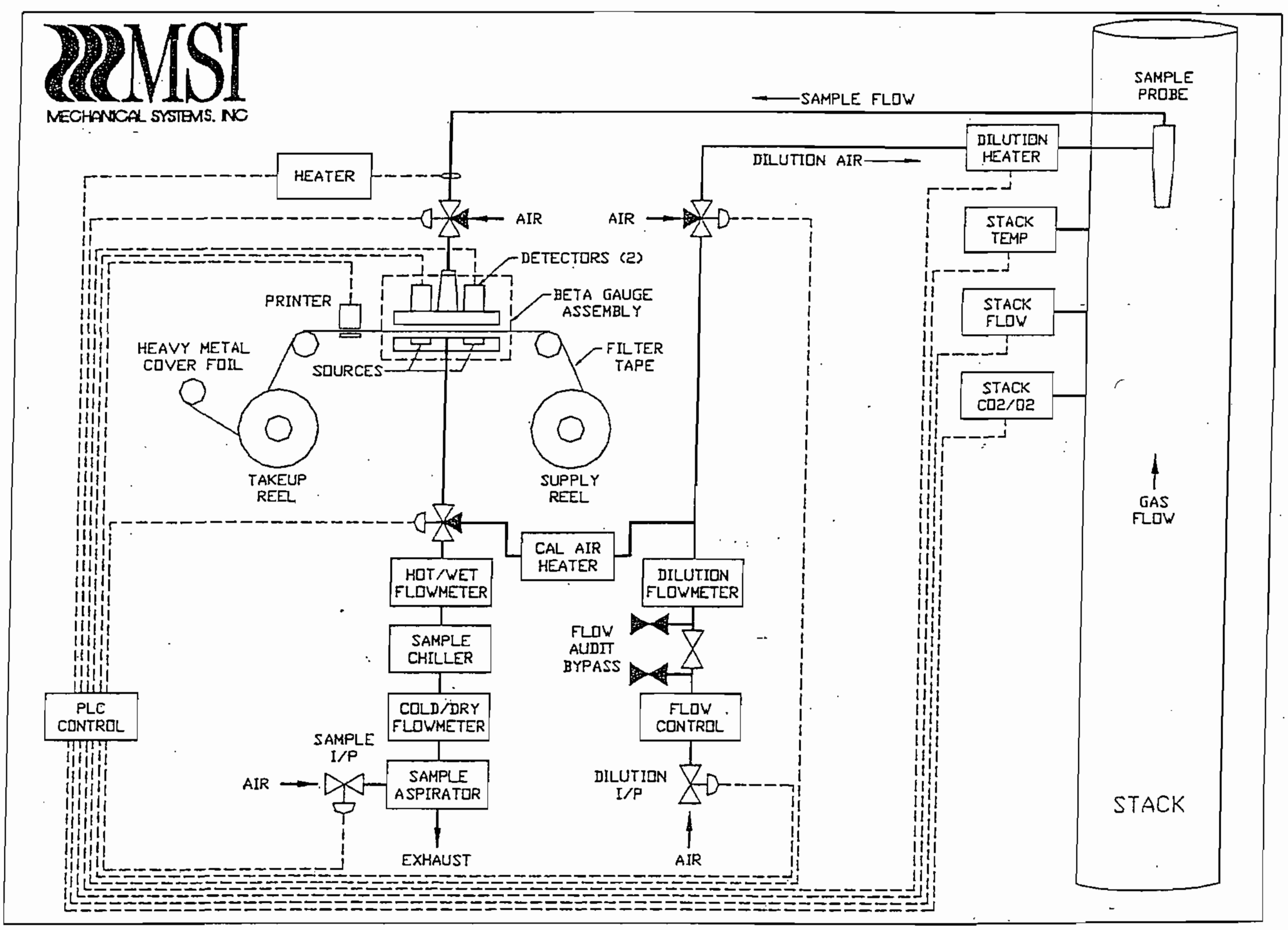


Figure 1.5: MSI BetaGuard PM Schematic Diagram

Beta Gauge

The Beta Gauge is a transmission-style sensor that transmits Beta particles through the filter tape and measures the Beta particles that get through the filter on the other side (see Figure 1.6).

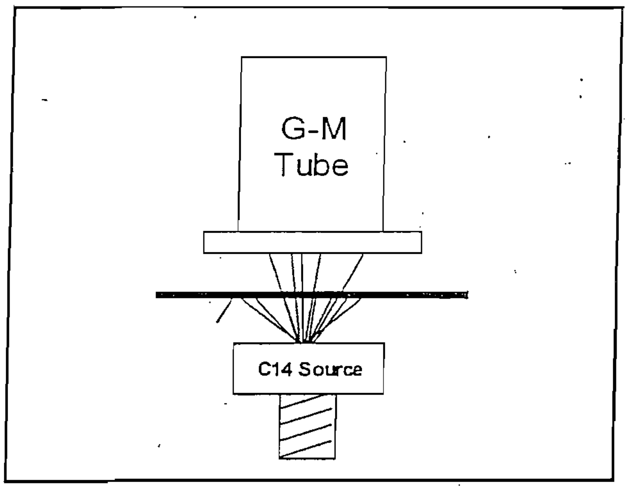
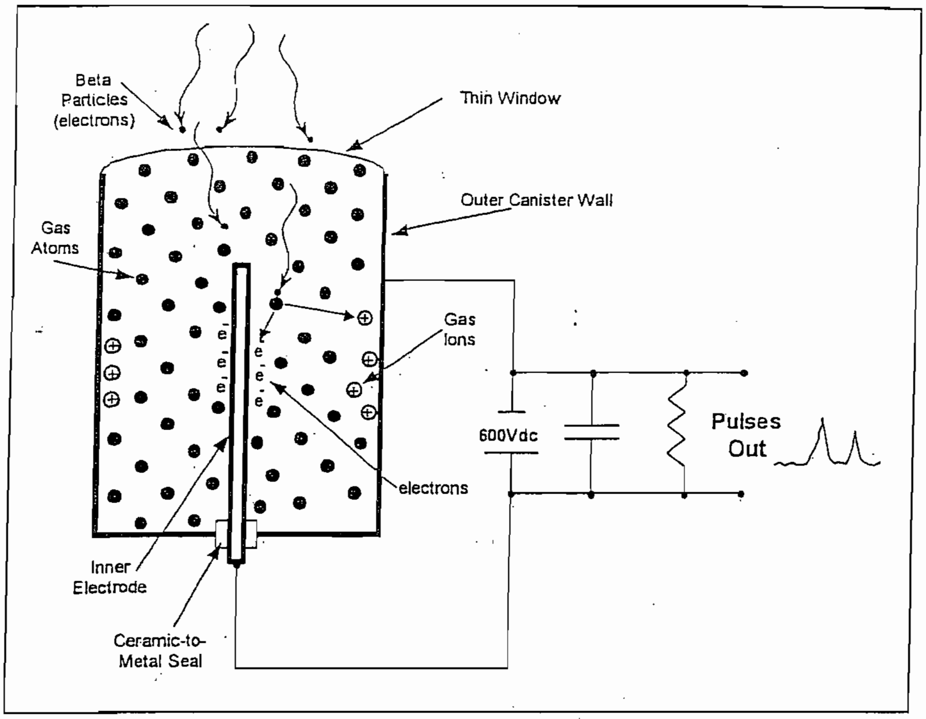


Figure 1.6: Beta Gauge Source and Detector

Beta particles are high energy electrons emitted from a radioactive isotope as it decays. They are not themselves radioactive, nor do they make anything they contact radioactive. The radioactive material, in this case Carbon-14 (C-14), is sealed in the source capsule and is not allowed to escape. The Beta particles are continuously being emitted through the source capsule window. Some are absorbed by the window itself, many are absorbed by the filter tape and the particulate particles, some are absorbed in the G-M Tube detector window and the rest are detected by the G-M Tube detector.

The Beta particles being emitted from the C-14 Source have an energy of 156 kev (kilo-electron volts), which is somewhat higher than the electrons striking the phosphor coating on the inside of a home television tube. The C-14 Beta particles can only travel about 10 inches in air before they are absorbed, and they are easily blocked by clothing and skin. The amount of radioactivity in the BetaGuard PM is similar to that in a household smoke detector, so no special labeling or licensing is required. It is recommended, however, that whenever any work is performed on the sources, filter tape holder or detectors, safety glasses must be worn.

The G-M Tube detector is a device that counts ionizing radiation (Alpha, Beta, Gamma) and is therefore called an ionization detector. A G-M, or Geiger-Mueller, Tube is a metal canister of gas with a thin window on one end and an electrode in the inside center (see Figure 1.7). A Beta particle that passes through the filter tape and the thin G-M Tube window will collide with the atoms of gas in the G-M Tube. Since a Beta particle is really a high energy electron, it has mass and an electrical charge and it is moving quickly. As the Beta particle collides with a gas atom, it gives some of its energy to an outer shell electron of that gas atom. If the outer shell electron now has enough energy to overcome the binding energy of the nucleus, it can escape from its atom. This results in an extra free electron in the G-M tube and an atom that has one fewer electron than it needs to be electrically neutral. This electron-deficient atom has an overall positive charge and is called an ion. This is the process of ionization and one Beta particle can ionize many hundreds of gas atoms. The gas in the G-M Tube is selected for its density and the ease with which its outer shell electrons can be stripped by the incoming Beta particle (ionization potential).



An electrode is sealed into the G-M tube through the bottom but is electrically isolated from the outer canister by a ceramic-to-metal seal. A high voltage is applied across the inner electrode and the outer canister that creates a large radial electric field inside the G-M Tube. Since the free electrons caused by the Beta ionization have a negative charge, they are attracted to the high potential inner electrode and the positively charged ions are attracted to the low potential canister wall.

Figure 1.7: Geiger-Mueller Tube Schematic

Since the electric field is so high, these charged particles are accelerated fast enough to cause ionization in more gas atoms. This process known as secondary ionization results in a rush of flowing charge to the inner electrode and the outer canister wall. This rapid charged particle flow is seen as a burst of current on the conductors attached to the electrode and canister. A resistor placed across these conductors converts the current burst to a voltage pulse for each Beta particle entering the G-M tube. Counting these pulses determines how many Beta particles are passing through either the clean filter tape or the filter tape with particulate. The ratio between the two pulse counts determines the net mass on the filter tape.

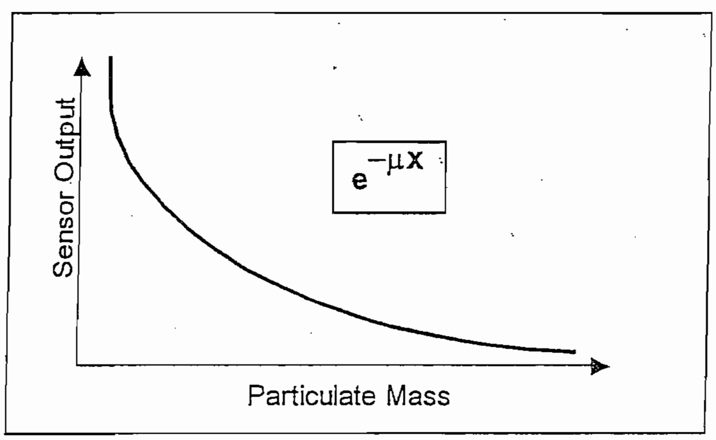


Figure 1.8: Inverse Exponential Beta Transmission Sensor Response

The response of the Beta transmission sensor to particulate mass is similar to that of an optical opacity sensor that shines light through the stack and measures its intensity after it has traveled through the stack gas where it has been partially scattered and absorbed. The sensor output is inversely proportional to the amount of mass between the source and detector and exhibits an exponential dependence as shown in Figure 1.8

Sample Flow

The stack gas is isokinetically drawn through a nozzle attached to a stainless steel ½" (12mm) diameter tube. The nozzle points against the direction of stack gas flow and has a well defined circular opening, typically 5 or 6mm diameter. A dilution tube, also ½" diameter stainless steel, connects to a mixing chamber just behind the rear of the nozzle and adds dry filtered ambient air in the dilution ratio set by the BetaGuard PM (typically between 1:1 and 10:1). The dilution flow is measured by a mass flowmeter in the instrument.

The total diluted sample is drawn through a heated ½" stainless steel sample line and passed through the filter tape where any particulates (dust) in the sample larger than 0.3 microns (0.01 thousandths of an inch diameter) are accumulated.

The filtered diluted sample gas then passes through a flowmeter that measures the diluted sample gas flow in the hot, wet state. If a dry basis particulate concentration measurement is needed, the diluted sample gas flows through a chiller where the water is removed, and then through another mass flowmeter to calculate the dry total flow. The sample gas is finally vented back into the stack or into open air.

Sample Heater

The sample line is actively heated by an electrical resistance heater that is controlled by the BetaGuard PM. The dilution line is optionally heated at the Probe flange by an electrical resistance in-line air heater. Additional closed loop controlled heaters are mounted in the filter holder and optionally in the cabinet sample gas circuit to insure that the sample remains hot. The BetaGuard PM can also be set to continuously vary the sample temperature to track the stack gas temperature if Isothermal Sampling mode is selected.

Particulate Measurement Cycle

The diluted stack gas sample is brought to the filter tape through a conical pipe that is mounted to the top half of the filter holder. The top and bottom half of the filter holder fit together tongue-in-groove style to trap the filter tape and seal around the conical pipe. A stainless steel tube is attached to the bottom half of the filter holder below the filter tape opposite the conical pipe. This assembly insures that the filter tape remains stationary while the sample gas is passed through it without allowing any of the sample gas to escape.

The sample gas is passed through the filter tape long enough to deposit a sufficient amount of mass for the BetaGuard PM measurement, typically 4 – 28 mg. The sample flow cycle is usually 7-15 minutes depending on stack particulate concentration. The filter tape is moved back and forth from under the sample gas flow to between the Beta gauge source and detector by a stepper motor and a friction wheel drive. Each time the filter tape is moved, a solenoid separates the two halves of the filter holder. When the filter tape stops moving, the filter holder halves are pressed tightly together by compression springs.

A typical measurement cycle is as follows:

Step 1	The stepper motor advances the filter tape to a clean section within the filter holder (about 92mm [3.6"])
Step 2	No sample is passed through the filter tape while the left-hand Beta Gauge measures a clean section of the filter tape for 2 minutes. This provides the zero measurement of that spot of the filter tape.
Step 3	The stepper motor reverses the filter tape until the spot measured in Step 2 is exactly beneath the conical pipe sample gas outlet (46mm [1.8"]).
Step 4	The valve opens to allow the sample gas to flow through the filter tape for the predetermined cycle time. At the same time, the right-hand Beta Gauge measures the clean section of filter tape between its source and detector for 2 minutes to obtain the zero measurement of that spot.
Step 5	The stepper motor advances the filter tape until the spot that just filtered the sample gas is again directly between the source and detector of the left-hand Beta Gauge (46mm [1.8"]).
Step 6	The left-hand Beta Gauge measures for 2 minutes the same spot of the filter tape where it measured the zero previously, only now it is loaded with particulates. Simultaneously, the valve opens to allow the sample gas to flow through the spot of filter tape that was measured for a zero reference with the right-hand Beta Gauge in Step 4 for the predetermined cycle time.
Step 7	After the left-hand Beta Gauge has measured the particulate-loaded spot for two minutes, the particulate concentration is displayed and the 4-20mA output is updated.
Step 8	When the sample gas flow cycle time of Step 6 is complete, the stepper motor reverses the filter tape until the spot measured in Step 4 by the right-hand Beta Gauge is returned, now loaded with particulates (46mm [1.8"]).
Step 9	The right hand Beta Gauge measures the particulate loaded filter spot for 2 minutes, the particulate concentration is displayed and the 4-20mA output is updated.
Step 10	Upon completion of the Step 9, the measurement process begins again at Step 1.

An important consequence of the BetaGuard PM measurement principle is that it always re-zeros the filter prior to depositing the particulate sample. This allows the instrument to reuse the filter spot a number of times before it begins to clog and the filter must be advanced. If this resampling option is selected, the life of a reel of filter tape can be extended from one month to two or three months.

Blowback

When compressed air is provided to the BetaGuard PM and the measurement cycle begins, the compressed air actuates a pneumatically actuated valve that allows the stack gas to be drawn into the instrument and the BetaGuard PM to operate. The position of the pneumatic actuator is sensed to always insure that compressed air is present so that the probe can be blown back on a regular basis to eliminate the possibility of dirt build-up and clogging. The interval between blowbacks is user selectable from the BetaGuard PM display and is usually eight (8) hours. When blowback is initiated, either automatically or manually, a valve is closed to stop sample gas from flowing through the filter tape and high pressure (≈70psig) air is forced through the sample and dilution lines, through the nozzle into the stack. The compressed air is pulsed in 2 second on, 2 second off cycles for about 20 seconds.

Automatic Beta Calibration

This routine is usually run daily and initiated by the data logger and lasts about 30 minutes. Automatic Beta Calibration checks the repeatability of the Beta Gauge measurement component of the BetaGuard PM by performing a zero check, a span check and a filter tape positioning check. During an Automatic Beta Calibration, the normal measurement mode of the BetaGuard PM is suspended. The Automatic Beta Calibration routine can also be initiated immediately through the BetaGuard PM display.

Automatic Flow Calibration

This routine is usually run daily and initiated by the data logger and lasts about 30 minutes. Flow Calibration can be run concurrent to the Automatic Beta Calibration. Automatic Flow Calibration checks the repeatability of the flowmeter components of the BetaGuard PM by routing the same flow through all of the flowmeters at two separate flow setpoints to perform a low span and a high span check. During an Automatic Flow Calibration, the normal measurement mode of the BetaGuard PM is suspended. The Automatic Flow Calibration routine can also be initiated immediately through the BetaGuard PM display.

THEORY OF NUCLEAR GAUGING

There are typically three types of radioactive emission used for industrial mass gauging, Alpha (α), Gamma (γ) and Beta (ß).

Alpha Emission

An Alpha particle is a ^{4}He nucleus and as such, is very large and heavy compared to the other forms of radioactive emission. They have very limited penetrating ability in solids and since Alpha gauging applications are used primarily for the measurement of gases, they will not be discussed further here.

Gamma Emission

Unlike Alpha (or Beta) radiation, Gamma radiation is not in the form of charged particles, but instead is electromagnetic radiation in and above the X-Ray spectrum. By analogy, a Beta source of, say, 500mCi activity emits as many Beta particles per second as the Gamma photons per second emitted by a 500mCi Gamma source. Unlike Beta particles, Gamma photons are emitted at a single energy determined by the particular isotope and interact with matter through fundamentally different mechanisms. Gamma photons have no charge and no mass, and are consequently much more penetrating than Beta particles in matter (like X-Rays) and are used primarily for quite thick targets and for fluorescence measurements.

Beta Emission

Beta particles are in fact high energy electrons ejected from the nuclei of certain radioactive materials. They are negatively charged, have energies ranging from zero to a maximum energy (units of electron Volts [eV]) determined by the specific radioactive isotope and are emitted in an average number per second defined by the Activity (units of Curies [Ci]) of the particular radioactive source.

Beta particles interact with matter through three primary mechanisms:

1) Inelastic collisions with electrons in the target (*Absorption*)

$$f_1\{k_1\rho(Z/A)\} \quad \textbf{eq. 11.1}$$

2) Elastic collisions with nuclei in the target (*Scatter*)

$$f_2\{k_2\rho(Z^2/A)\} \quad \textbf{eq. 11.2}$$

3) Inelastic collisions with nuclei in the target (*Bremsstrahlung*)

$$f_3\{k_3\rho(Z^2/A)\} \quad \textbf{eq. 11.3}$$

where k_n are constants proportional to the Beta energy,
ρ is target density,
Z is the target Atomic Number and
A is Atomic Mass.

Beta particles are particularly ideal for use in industrial gauging because of their relatively short range in matter and therefore high sensitivity to small changes in mass, and since the source / detector components are very long-term stable and industrially rugged. The Carbon-14 isotope used in most Beta Gauge Particulate Monitors has a half-life of over 5000 years, and therefore exhibits no measurable change in radiation output and thus no measurement drift throughout the life of the instrument. The G-M Tube detectors are simple gas-filled canisters with no moving parts. They exhibit no drift characteristics unless they are physically damaged, in which case their output goes to zero, an easily identifiable fault condition. In the unlikely event of a G-M Tube failure, the dual detector BetaGuard PM has the ability to sense the zero output condition and automatically switches its operating mode to that of a single detector Beta Gauge. In this way, the instrument will continue to measure properly with no loss of data, and repairs can be made in a non-emergency manner.

A consequence of the manner in which Beta particles interact with matter to determine mass is that there can be some measurement dependence on the chemical composition of the specific particulate. It is therefore worthwhile to investigate the extent to which the chemical composition dependence of the BetaGuard PM has on its ability to accurately measure the products of combustion. When considering the design of a Beta Transmission Sensor, a radioactive source is mounted on one side of the target and a Beta particle detector is mounted on the target's other side. The detector then measures the Beta particles that pass through the target.

Assuming that all the Beta particles that do not pass through the target and are not detected are in fact absorbed via mechanism 1, the response curve of the ß-Sensor would describe an exponential dependence (derived from Equation 1 above) on target mass and be independent of target chemical composition.

$$e^{-\mu x}, \text{ where } \mu = f1\{k_1\rho(Z/A)\}$$

If Equations 2 and 3 above are combined as

$$F\{K\rho(Z^2/A), \qquad \text{eq. 11.4}$$

then the total interactions of Beta particles with matter can be expressed by the following definition of μ, the absorption coefficient:

$$f_1\{k_1\rho(Z/A)\} + F\{K\rho(Z^2/A)\} \qquad \text{eq. 11.5}$$

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To: Dick Hopper
Date: June 03, 2003
From: Ron Baldus
Subject: CAM proposed guidelines for Boilers

The proposed CAM limits are based on the tests performed during a four-month period beginning February of 2003. The primary boiler parameters of steam rate, excess O_2, scrubber DP, scrubber recycle and oil were monitored. The test data was combined with control information to establish the following parameters:

	One-hour Average Excess O_2 (%)		One-hour Average Scrubber Recycle (gpm)	One-hour Average Scrubber DP ("H_2O)
PB 1	3.0			
PB 2 Bark	3.0	A-Scrubber	>1300	> 12
PB 2 Bark/Oil	3.0			
PB 2 Oil	5.0			
PB 3 Bark	3.0			
PB 3 Bark/Oil	3.0	B-Scrubber	>1300	> 9.5
PB 3 Oil	8.6			

A special case was tested to simulate the loss of the scrubber recirculation pump and replacement of filtrate with fresh water. The scrubbers were capable of meeting the particulate requirements under normal conditions. In this special case, the parameters were:

	A-Scrubber	B-Scrubber
Press. Drop ("H_2O)	9	6
Recycle (gpm)	380	250

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Appendix A
CAM Objectives for Particulate Control

Identify and control key operating parameters that affect particulate emissions.

Boiler Stability
Excess O_2 is an indicator of burning conditions related to bark quality, air distribution and oxygen supply. The test data presented here establishes the lower Excess O_2 operating range allowed while complying with the particulate limit.

Scrubber Efficiency
The venturi scrubber efficiency is usually related to the pressure drop across the scrubber and the recycle flow through the nozzles. The test data presented here is to establish the minimum pressure drop and recycle flow ranges allowed while complying with the particulate limit.

Test Data
The particulate data for each operating category (Bark, Bark/Oil and Oil) was normalized to a common "permit reference limit" for each category. This allows plotting data for multiple categories and multiple conditions on one diagram. For example, if the plotted particulate limit for #3 bark boiler is 47 #/hr and a test result shows 24.5 #/hr with a limit of 45 #/hr for the test conditions, 24.5 will be scaled by 47/45=25.6 so the limit bar of 47 shown in the figures will be relative for all tests in a category.

The Excess O_2 data is for the new Thermox O_2 sensors. Calibration tests showed consistent Excess O_2 readings between calibrations. Where Thremox readings were not available, they were estimated from the tested difference between the Yokagawa and the portable tester readings.

The plotted data for each attribute focuses primarily on the extremes for that variable and the boiler tested without being affected by other parametric limit tests.

All tests are one-hour averages.

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B-Scrubber Recycle Flow

Figure 1 shows particulate as a function of scrubber recycle flow. The lower test point was 250 gpm with fresh water. Fresh water is the special case for loss of the recirculation pump.

The horizontal bar on the left side of the figure shows the limit.

The objective is to maintain a minimum of a one-hour average at 1300 gpm recycle through B-scrubber.

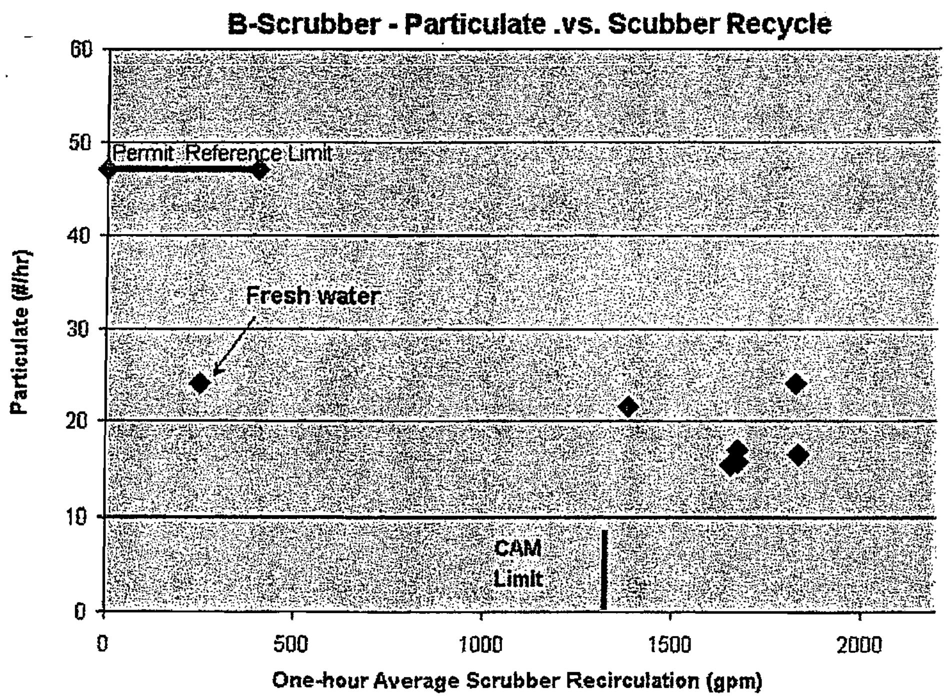

Figure 1: Particulate .VS. Scrubber Recirulation for B-Scrubber

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B-Scrubber Differential Pressure

Figure 2 shows the differential pressure across the B-scrubber. There is no discernable degradation of performance at the DP's tested. The point at DP=6 is the test condition with fresh water only. At the extremely low DP and recirculation rate (250 gpm), the particulate tests were acceptable.

The horizontal bar on the left side of the figure shows the limit.

The objective is to maintain a minimum of a one-hour average at 9.5 "H2O differential pressure across B-scrubber.

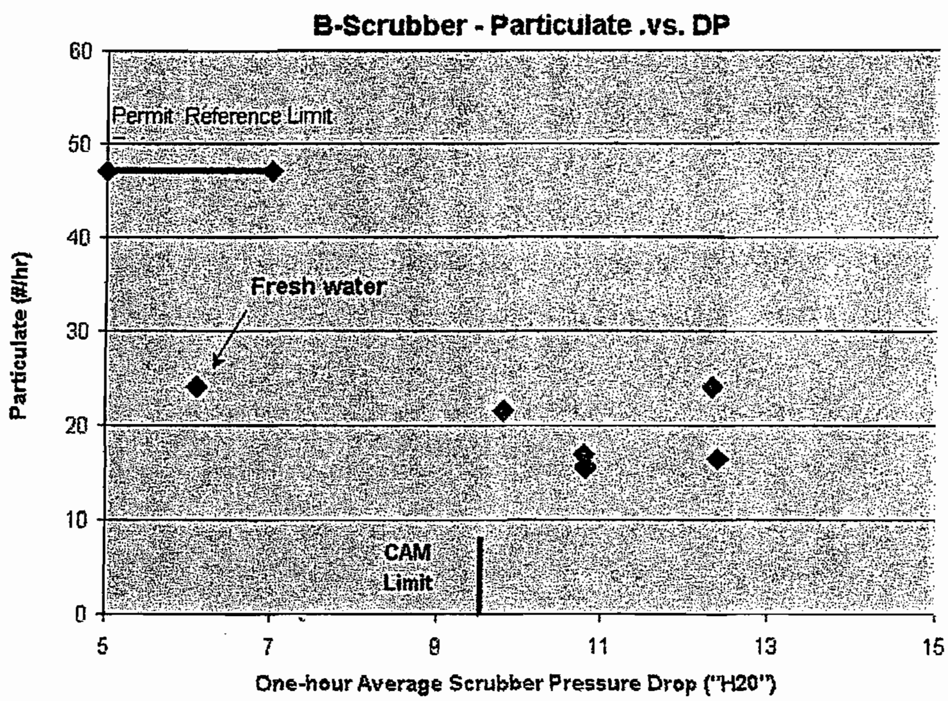

Figure 2: Particulate .VS. Scrubber Pressure Drop for B-Scrubber

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#3 Bark Boiler Exess O_2 – Bark and Bark/Oil

Excess air was reduced under controlled conditions to establish the use of Excess O_2 as an indicator of unstable burning that may cause particulate.

The horizontal bar on the left side of the Figure 3 shows the limit.

The objective is to minimize Excess O_2 during normal operation with a minimum of a one-hour average at 3.0% for bark and bark/oil.

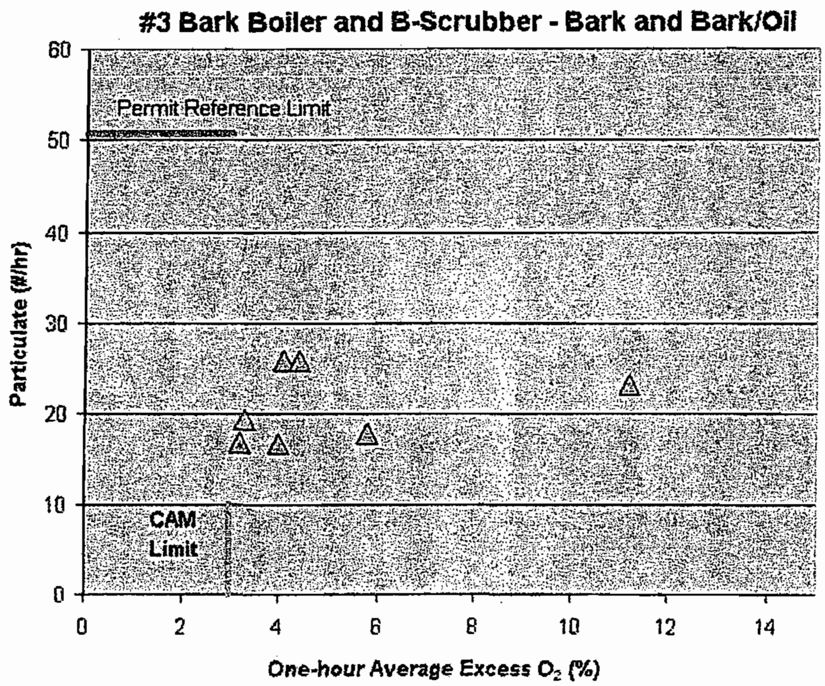

Figure 3: Particulate .VS. Excess O_2 for #3 Bark Boiler on Bark and Bark/Oil

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#3 Bark Boiler Excess O_2 – Oil Only

Excess air was reduced under controlled conditions to establish the use of Excess O_2 as an indicator of unstable burning that may cause particulate.

The horizontal bar on the left side of the Figure 4 shows the limit.

The high value was a test to see how far the Excess O_2 could be lowered. The value of 8.3 was too low.

The objective is to minimize Excess O_2 during normal operation with a minimum of a one-hour average at 8.6% for oil only.

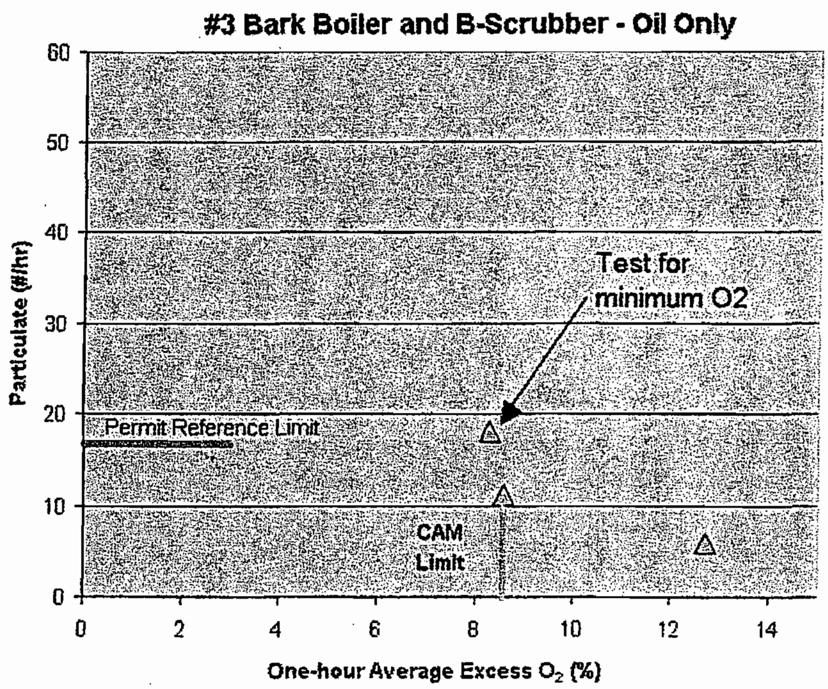

Figure 4: Particulate .VS. Excess O_2 for #3 Bark Boiler on Oil Only

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A-Scrubber Recycle Flow

The test for the effect of recycle flow on particulate shows negligible effect within the range tested as shown in Figure 5 below.

The horizontal bars on the left side of the figure show the limits for Bark, Bark/Oil and only Oil as coded in the legend on the right.

The objective is to maintain a minimum of a one-hour average at 1300 gpm recycle through A-scrubber.

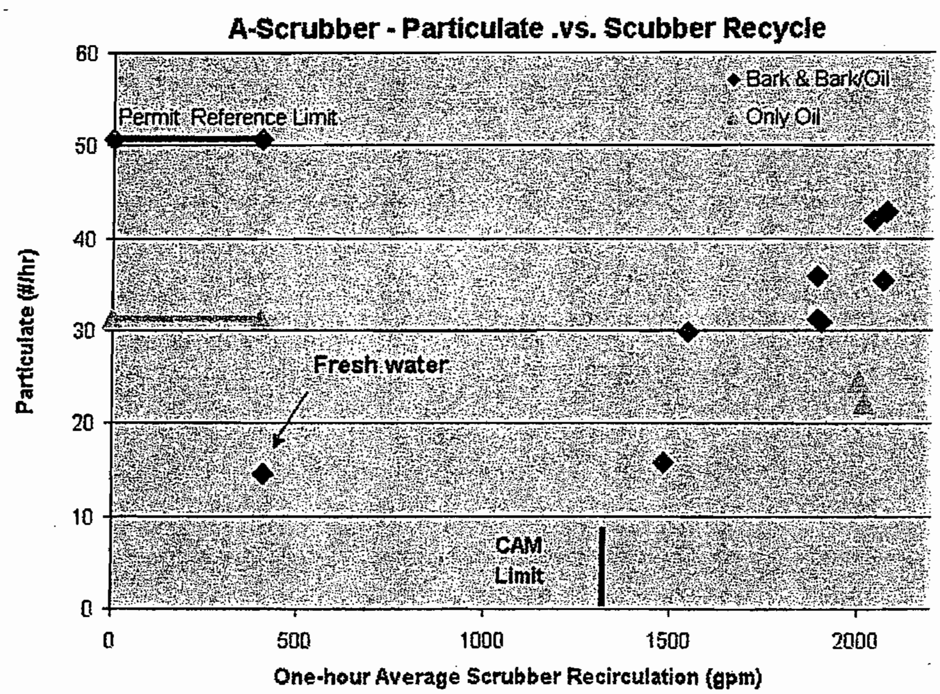

Figure 5: Particulate .VS. Scrubber Recirulation for A-Scrubber

416 NE Dallas Street, Suite 204
Camas, Washington 98607
ph (360) 834-0991
fax (360) 834-7228

5470 Shilshole Avenue NW, Suite 420
Seattle, Washington 98107
ph (206) 298-3373
fax (206) 298-9949

6702-C Plantation Road
Pensacola, Florida 32504
ph (850) 484-4343
fax (850) 484-4387

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A-Scrubber Differential Pressure

Figure 6 shows the differential pressure across the scrubber. There is no discernable degradation of performance at the DP's tested. The point at DP=8.5 is the test condition with fresh water only. At the extremely low DP and recirculation rate (380 gpm), the particulate tests were acceptable.

The horizontal bars on the left side of Figure 6 show the limits for Bark &Bark/Oil and only Oil as coded in the legend on the right. Looks like a min. Pressure is needed, as well

The objective is to maintain a minimum of a one-hour average at 12 "H_2O differential pressure across A-scrubber.

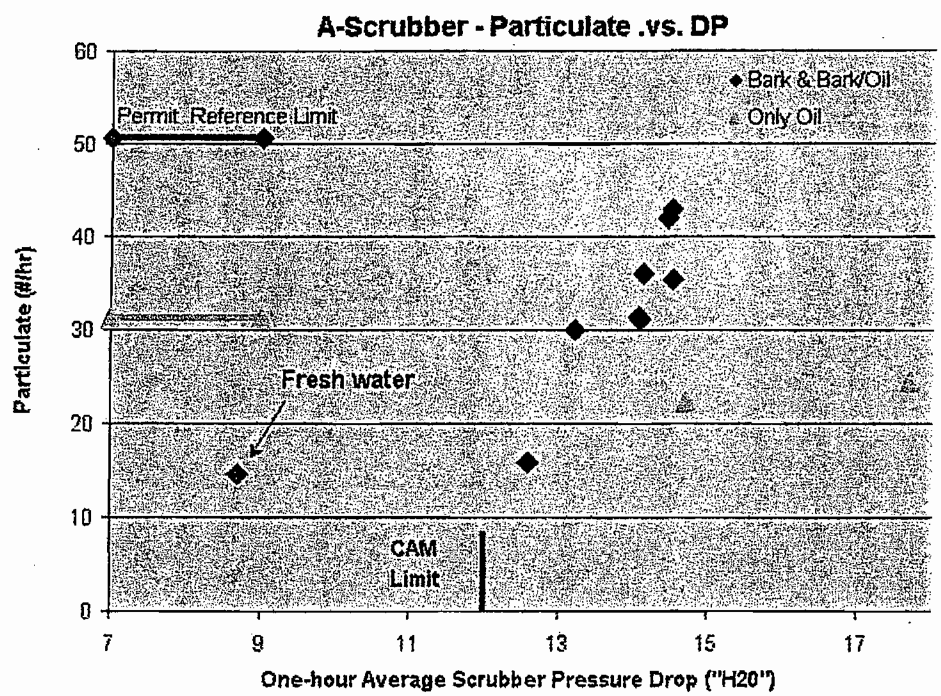

Figure 6: Particulate .VS. Scrubber Pressure Drop for A-Scrubber

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#2 Bark Boiler Excess O_2 – Bark and Bark/Oil

Excess air was reduced under controlled conditions to establish the use of Excess O_2 as an indicator of unstable burning that may cause particulate.

The horizontal bar on the left side of Figure 8 shows the limit.

The objective is to minimize Excess O_2 during normal operation with a minimum of a one-hour average at 3.0% for bark and bark/oil.

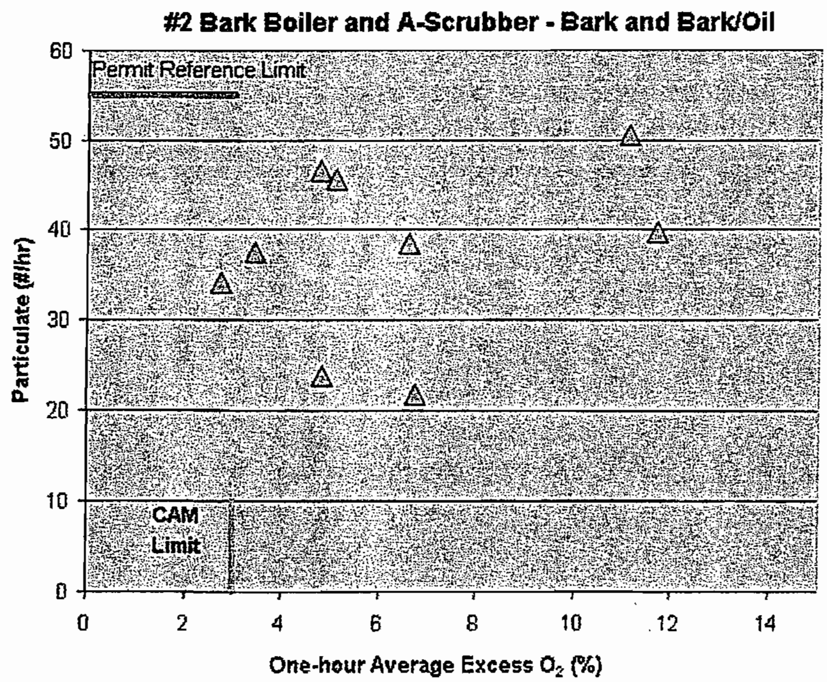

Figure 8: Particulate .VS. Excess O_2 for #2 Bark Boiler on Bark and Bark/Oil

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#2 Bark Boiler – Excess O_2 – Oil Only

Excess air was reduced under controlled conditions to establish the use of Excess O_2 as an indicator of unstable burning that may cause particulate.

The horizontal bar on the left side of the Figure 9 shows the limit.

The objective is to minimize Excess O_2 during normal operation with a minimum of a one-hour average at 5.0% for firing only oil.

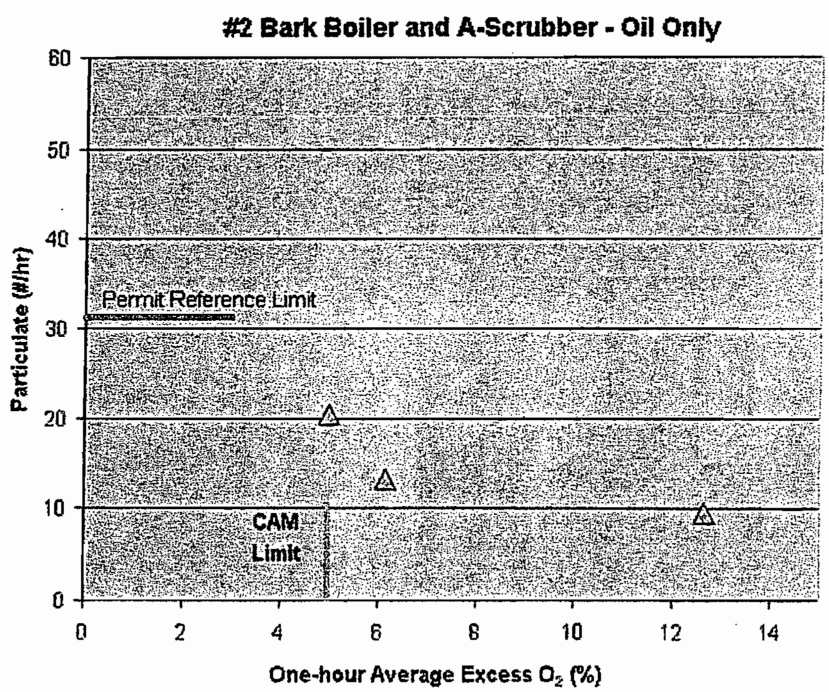

Figure 9: Particulate .VS. #2 Bark Boiler Excess O_2

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#1 Power Boiler – Excess O_2

Figure 10 shows the Particulate versus Excess O_2 for a variety of operating conditions. Excess O_2 will be used as a control limit for #1 Power Boiler.

The Permit Reference Limit shown is a composite for #1 Boiler (oil) and #2 Boiler (Bark, Bark and Oil, only Oil) since their gases both go through Scrubber-A. The scaling of the PM tests for a common reference limit is described at the beginning of this report.

The objective is to maintain Excess O_2 above a one-hour average at 3.0% during normal operation when firing only oil.

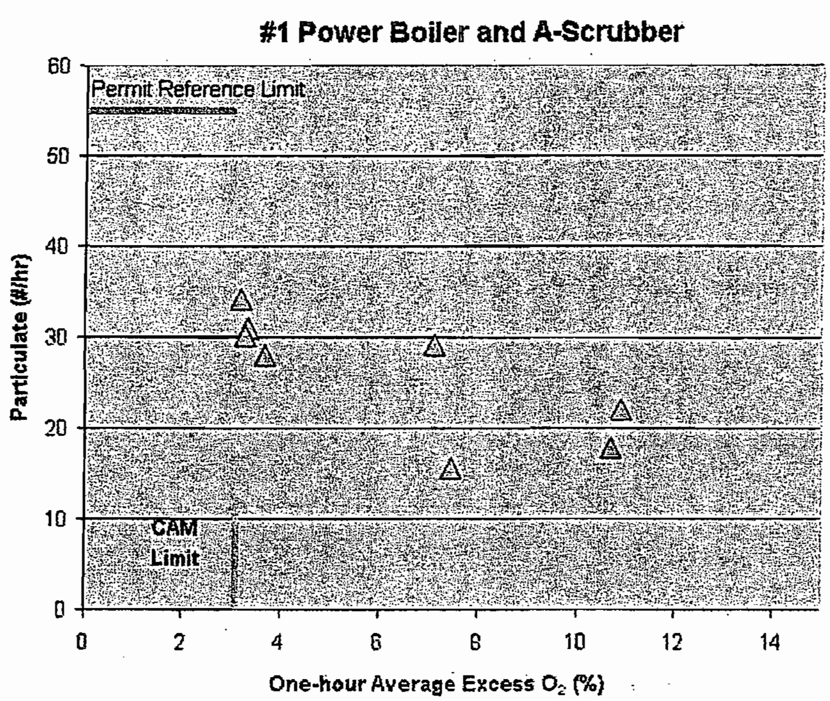

Figure 10: Particulate .VS. #1 PB Excess O_2

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#1 Power Boiler – Excess O2, Filtrate Make-up, No Defoamer

Figure 11 shows the Particulate versus Excess O_2 for a variety of operating conditions when the scrubber make-up is filtrate and little or no defoamer is used.

There were opportunities for evaluation during the testing program where defoamer was not being added to the scrubber due to equipment issues.

There is one high PM value for #2 Boiler and 3 high PM values for #3 Boiler. These results show that is not possible to operate without defoamer when using scrubber filtrate.

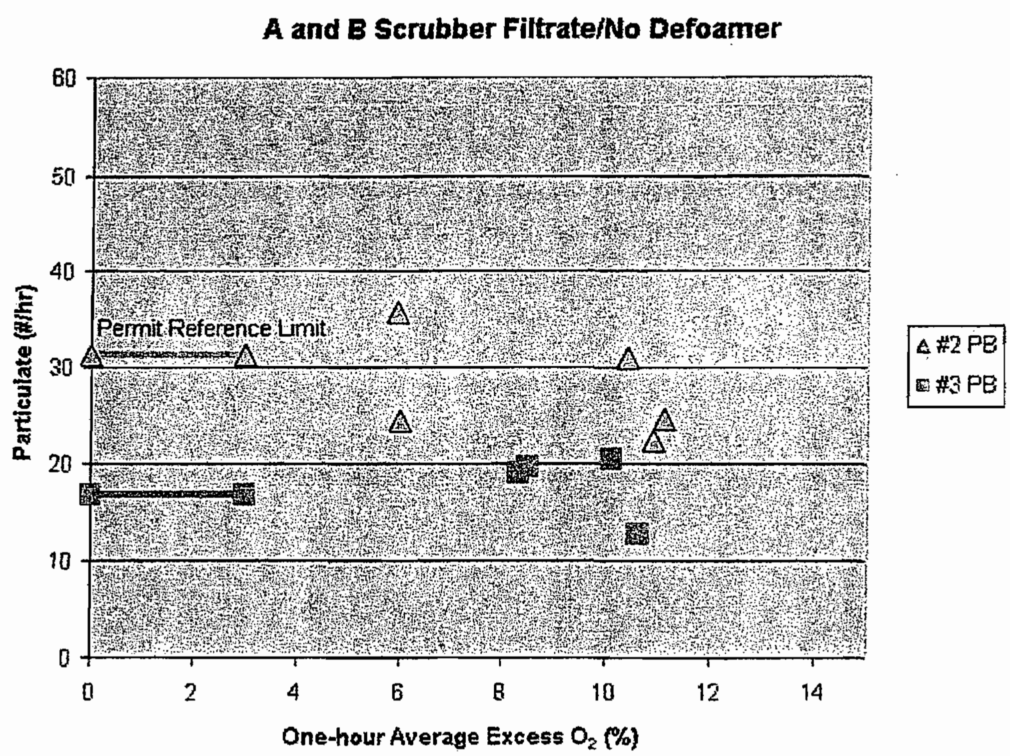

Figure 11: Particulate .VS. Excess O_2, little or no defoamer

Test Data

Test data for Excess O_2 is shown in Figure 12. The #1 PB limits are higher then expected because they are actually the limits for A-Scrubber which is a combination of #1 Boiler and #2 Boiler (bark and/or oil).

Test Equip	Fuel	Test #	Start Test	Ex O2 %	PM Test #/hr	PM Limit #/hr	Scrbr Mkup type	PM Plot Limit #/hr	Adj PM for Plot #/hr	CAM O_2 Limit %
#1 PB	Oil	C1	02/13/03 15:31	3.2	31.0	50.0	Filt	55	34.1	3.0
	Oil	A11	05/14/03 14:47	3.7	20.8	40.7	Water	55	28.1	
	Oil	C2	02/13/03 16:56	3.3	31.3	55.5	Filt	55	31.0	
	Oil	C3	02/13/03 18:24	3.3	34.0	62.1	Filt	55	30.1	
	Oil	A4	04/17/03 11:14	7.1	29.9	56.2	Filt	55	29.3	
	Oil	A5	04/17/03 13:20	7.5	14.8	51.7	Filt	55	15.5	
	Oil	A12	05/14/03 16:26	10.9	13.2	32.8	Water	55	22.1	
	Oil	A7	04/17/03 15:35	10.7	13.7	42.4	Filt	55	17.8	
#2 PB	Bark/oil	C1	02/13/03 15:31	2.8	31.0	50.0	Filt	55	34.1	3.0
	Bark	A13	05/14/03 18:10	3.5	32.3	47.3	Water	55	37.6	
	Bark	A6	05/13/03 18:47	4.8	16.9	39.0	Water	55	23.8	
	Bark	A8	04/22/03 17:00	4.8	40.3	47.6	Water	55	46.5	
	Bark	A6	04/22/03 11:21	5.1	35.8	43.1	Water	55	45.7	
	Bark	A7	04/22/03 15:33	6.6	32.5	46.5	Water	55	38.4	
	Bark	A7	05/13/03 20:20	6.7	12.4	31.5	Water	55	21.7	
	Bark	A14	05/14/03 20:04	11.1	22.1	24.0	Water	55	50.6	
	Bark	A15	05/15/03 08:32	11.7	24.9	34.4	Water	55	39.8	
#2 PB	Oil	A18	05/16/03 09:49	5.0	20.5	31.2	Filt	31.2	20.5	5.0
	Oil	A16	05/15/03 10:30	6.2	13.3	31.2	Water	31.2	13.3	
	Oil	A17	05/15/03 12:18	12.7	9.6	31.2	Water	31.2	9.6	
#3 PB	Bark	B5	04/16/03 13:19	3.2	16.9	50.6	Filt	50.6	16.9	3.0
	Bark	B4	04/16/03 11:01	3.3	18.3	47.9	Filt	50.6	19.4	
	Bark/oil	B7	04/16/03 18:03	4.0	14.4	43.7	Filt	50.6	16.7	
	Bark	B6	04/16/03 16:05	4.1	25.9	50.6	Filt	50.6	25.9	
	Bark	B1	04/15/03 14:39	4.4	25.9	50.6	Filt	50.6	25.9	
	Bark	B2	04/15/03 17:27	5.8	17.7	50.6	Filt	50.6	17.7	
	Bark	B3	05/15/03 18:42	11.2	23.2	50.6	Filt	50.6	23.2	
#3 PB	Oil	B4	05/16/03 08:06	8.3	18.0	16.7	Filt	16.7	18.0	
	Oil	B2	05/15/03 16:49	8.6	11.3	16.7	Filt	16.7	11.3	8.6
	Oil	B1	05/15/03 14:19	12.7	5.8	16.7	Water	16.7	5.8	
Filtrate/No Defoamer										
#2 PB	Oil	A8	04/17/03 17:54	5.9	35.7	31.2	Filt	31.2	35.7	
	Oil	A9	04/23/03 13:40	10.9	22.3	31.2	Filt	31.2	22.3	
	Oil	A10	04/23/03 15:22	10.4	30.9	31.2	Filt	31.2	30.9	
	Oil	A11	04/23/03 18:23	11.1	24.6	31.2	Filt	31.2	24.6	
	Oil	A12	04/24/03 10:54	6.0	24.4	31.2	Filt	31.2	24.4	
#3 PB	Oil	B8	04/16/03 20:11	10.1	20.4	16.7	Filt	16.7	20.4	
	Oil	B9	04/24/03 15:10	10.6	12.8	16.7	Filt	16.7	12.8	
	Oil	B10	04/24/03 17:03	8.5	19.6	16.7	Filt	16.7	19.6	
	Oil	B11	04/24/03 18:42	9.3	18.9	16.7	Filt	16.7	18.9	

Figure 12: Test data for Excess O_2

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Test Data

Test data for Scrubber parameters is shown in Figure 13.

Test Equip	Test #	Start Test	Flow gpm	DP "H₂0	Oil gpm	PM Test #/hr	PM Limit #/hr	Scrbr Mkup type	PM Plot Limit #/hr	Adj PM for Plot #/hr
A Scrubber	C1	02/13/03 15:31	1900	14.1	bark/oil	31.0	50.6	Filtrate	50.6	31.0
	C2	02/13/03 16:58	1892	14.1	bark/oil	31.3	50.6	Filtrate	50.6	31.3
	C3	02/13/03 18:24	1889	14.1	bark/oil	34.0	47.9	Filtrate	50.6	35.9
	A6	04/22/03 11:21	2041	14.4	bark/oil	35.8	43.1	Filtrate	50.6	42.0
	A7	04/22/03 15:33	2068	14.5	bark/oil	32.5	46.5	Filtrate	50.6	35.4
	A8	04/22/03 17:00	2074	14.5	bark/oil	40.3	47.6	Filtrate	50.6	42.8
	A4	04/17/03 11:14	1548	13.2	bark	29.9	50.6	Filtrate	50.6	29.9
	A5	04/17/03 13:20	407	8.7	bark	14.6	50.6	Filtrate	50.6	14.6
	A7	04/17/03 15:35	1481	12.6	bark/oil	13.7	43.7	Filtrate	50.6	15.9
	A9	04/23/03 13:40	2020	14.7	oil	22.3	31.2	Filtrate	31.2	22.3
	All	04/23/03 18:23	2007	17.7	oil	24.6	31.2	Filtrate	31.2	24.6
B Scrubber	B1	04/15/03 14:39	1825	12.3	bark	25.9	50.6	Filtrate	47	24.1
	B2	04/15/03 17:27	1831	12.4	bark	17.7	50.6	Filtrate	47	16.4
	B4	04/16/03 11:01	1676	10.6	bark	18.3	50.6	Filtrate	47	17.0
	B5	04/16/03 13:19	1675	10.8	bark	16.9	50.6	Filtrate	47	15.7
	B6	04/16/03 16:05	250	6.1	bark	25.9	50.6	Filtrate	47	24.1
	B7	04/16/03 18:03	1654	10.8	bark/oil	14.4	43.7	Filtrate	47	15.5
	B3	05/15/03 18:42	1380	9.8	bark	23.2	50.6	Filtrate	47	21.5

Figure 13: Test data for Scrubber parameters

DEP ROUTING AND TRANSMITTAL SLIP

TO: (NAME, OFFICE, LOCATION)

1. Jonathan Hotton
2. MS 3500
3.
4.
5.

PLEASE PREPARE REPLY FOR:

- ____ SECRETARY'S SIGNATURE
- ____ DIV/DIST DIR SIGNATURE
- ____ MY SIGNATURE
- ____ YOUR SIGNATURE
- ____ DUE DATE ____________

ACTION/DISPOSITION

- ____ DISCUSS WITH ME
- ____ COMMENTS/ADVISE
- ____ REVIEW AND RETURN
- ____ SET UP MEETING
- X FOR YOUR INFORMATION
- X HANDLE APPROPRIATELY
- ____ INITIAL AND FORWARD
- ____ SHARE WITH STAFF
- ____ FOR YOUR FILES

COMMENTS:

CAM Plan response for Raymond

FROM: Rita Smith DATE: 6-9-03 PHONE:

DEP 15-026 (12/93)

Rayonier

Performance Fibers

Fernandina Mill

June 5, 2003

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JUN 13 2003

BUREAU OF AIR REGULATION

NORTHEAST DISTRICT
JACKSONVILLE, FL

2003 JUN - A 11:44

Airborne Express #3958180634

Mr. Christopher L. Kirts, P.E.
District Air Program Administrator
Department of Environmental Protection
7825 Baymeadows Way, Suite B200
Jacksonville, FL 32256-7590

RE: Request for Additional Information on Title V Permit Renewal Application Dated January 3, 2003 for Final Title V Permit No. 08900004-5-AV

Dear Mr. Kirts:

This letter responds to yours of January 3, 2003 which requests additional information on our application to renew the above referenced Title V permit. These responses are numbered in the same order as in your letter. Please note that your letter of April 16, 2003 granted our request for an extension to June 6, 2003 to prepare this response.

1. MACT II is applicable to the sulfite recovery boiler. MACT II is technically 40 CFR Part 63, Subpart MM and applies to combustion sources such as recovery boilers and lime kilns at kraft, sulfite and semichemical mills.

2. The List of Applicable Regulations has been revised. A revised application form with Attachments is enclosed with this response.

3. There was no intention to increase the regulated emissions from the power boilers to require New Source Review. We have been informed that increases in emissions due to increases in operating hours requires New Source Review. We disagree. But that is no longer the issue here as we have been informed that previous operating permits and the present Title V permit allows 8760 hours per year operation of the boiler and that no additional permitting is required to continue that allowance. Thus we have included in the revised application operation of each boiler for 8760 hours per year.

However, we still note that the heat input did not appear accurate given the assumed efficiency for the boilers. Thus, in previous permits we increased the heat input and accordingly reduced the particulate emission rate not to increase emissions. The Department has requested that a construction permit be submitted for this change, even though there is no change in emissions. A construction permit application is enclosed with this response. However, since there are no changes in emissions, or the plume characteristics, no modeling, monitoring or other analysis is included.

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Telephone (904) 261-3611 • Fax (904) 277-1411

4. See response to question 3.
5. See response to question 3.
6. See response to question 3.
7. See response to question 3.

8. This tank was replaced with an identical but smaller tank. The rest of the unloading system remains the same.

9. The Brinks operate whenever liquor is fired in the boiler. The Brinks can be off-line (by-passed) when liquor is being burned for emergencies or during startup or shutdown provided those periods do not exceed 2 hours. When only oil is burned, there is no requirement to use the Brinks.

10. The 2002 production rate equivalent to the 153,205 ADMT/yr. PSD review level was 145,895 ADMT/yr.

11. Compliance with 40 CFR 63, Subparts S and MM has not added any additional emission units.

12. The Alternate Operating Scenario provides the rationale for avoiding a PSD permit for the added Number 6 digester. It describes a digester operating rate such that production and therefor emissions do not increase, despite an increase in production capacity.

13. Attachment 18 summarizes the specific conditions of previous operating permit carried forward onto the Title V permit being renewed pursuant to this application. After discussions between Rita Felton-Smith and David Tudor it was mutually decided that these additional requirements were established by stipulated order which imposed requirements that passed directly into the Air Operating Permit and thence the Title V permit. They were never part of an Air Construction Permit that we could find. Therefore, it was decided that the references in this attachment should remain unchanged.

14. Refer to Question 13 above. Since no Air Construction Permit is available these references to Air Operating Permits should remain.

15. We have not changed the permit references in Attachment 34. Since these requirements originated in a stipulated order, and were not part of an Air Construction permit we have retained the references to previous Air Operation permits.

16. The number 6 oil storage tank was omitted from the renewal application. It has been added as an unregulated emission unit and is now included in the list of sources covered by the application in Attachment 1.

17. A revised Attachment 26 to reflect the two pack towers is included with the revised Attachments enclosed.

18. No changes need be made to Attachment 25 to reflect the compliance with Subpart S.

19. Revised Effluent Guidelines for dissolving sulfite grades has not been promulgated. The Bleach Plant MACT requirements do not yet apply to this facility. Further documentation on the status of this rulemaking can be provided if requested.

20. A revised CAM Plan is submitted with this response. We agree that the sulfur dioxide from pulping, sulfur dioxide from recovery boiler and the pulping, washing and evaporation methanol emission are exempt from the CAM rule requirements. They have been removed from the CAM Plan to avoid confusion.

We fail to understand the Department's position on CAM Plans. An approvable CAM Plan was submitted with the original renewal application. A revised Plan is submitted with this Response. The CAM Rule at 40 CFR 64 is written anticipating that a methodology would be submitted for regulatory authority approval. Implementation of the approved monitoring is to commence as soon as practicable but not later than 180 days after approval. [See 40 CFR 64.6(e)(2)]. This is clearly to allow for the establishment of ranges of the approved monitoring methodology.

Perfection of Ranges only Maybe! Doesn't work well in FL

If you have questions regarding these responses please contact either Dave Tudor at (904) 277-1452, E-mail: david.tudor@rayonier.com, or Dick Hopper at (904) 277-1480, E-mail: dick.hopper@rayonier.com.

Yours very truly,

Paula Ogle for W. M. Burch

W. M. Burch
General Manager

enc.

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JUN 09 2003

STATE OF FLORIDA
DEPT. OF ENV. PROTECTION
NORTHEAST DISTRICT-JAX

LIST OF ATTACHMENTS INCLUDED IN THIS APPLICATION

Attachment	Title
1	List of Sources included in this application
2	Applicable Requirements
3	List of Pollutants Emitted from the Facility
4	Area Map
5	Facility Plot Plan
6	Facility Process Flow Diagram
7	Precautions to Prevent Emissions of Unconfined Particulate Matter
8	Fugitive Emission Identification
9	List of Proposed Insignificant Activities
10	List of Equipment/Activities Regulated Under Title IV
11	Alternative Methods of Operation
12	Risk Management Plan Verification
13	Compliance Certification
14	B1, B2 & B3 – Process Flow Diagram
15	Fuel Specification
16	B1, B2 & B3 Description of Control Equipment
17	B1, B2 & B3 Description of Stack Sampling Facilities
18	B1, B2 & B3 Additional Applicable Requirements
19	CAM Plan
20	MS – Process Flow Diagram
21	RB – Process Flow Diagram
22	RB – Description of Control Equipment
23	RB – Description of Stack Sampling Facilities
24	RB – Identification of Additional Applicable Requirements
25	VS – Process Flow Diagram
26	VS – Description of Control Equipment
27	VS – Identification of Additional Applicable Requirements
28	EV – Process Flow Diagram
29	EV – Description of Control Equipment
30	EV – Description of Stack Sampling Facilities
31	EV – Procedures for Startup and Shutdown
32	WT – Process Flow Diagram
33	Compliance Report

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
R	B1	PA001	nr 1 boiler
R	B2	PB001	nr 2 boiler
R	B3	PC001	nr 3 boiler
R	MS	AP003	molten sulfur handling area
R	RB	RB041	recovery furnace stack
R	VS	AP018	acid storage tank #4
R	VS	AP011	cooled SSL tank
R	VS	AP015	acid storage tank #1
R	VS	AP010	vent gas scrubber
R	VS	AP017	acid storage tank #3
R	VS	AP019	acid storage tank #5
R	VS	AP016	acid storage tank #2
U	BL	BPA002D	6F washer hood exhaust fan
U	BL	BP011	#5 HCE stock tank vent (new)
U	BL	BPA002F	1F washer hood exhaust fan
U	BL	BPR017	#5 washer exh fan to roof
U	BL	BPR009	roof exh fan over #4 post hypo washer(east)
U	BL	BPA001D	5A washer seal tank vent
U	BL	BP008	exh fan-S side 2R floor-East
U	BL	BPA002E	2F washer hood exhaust fan
U	BL	BPR012	roof exh fan on penthse-middle (HCE/hypo)
U	BL	BPR014	HCE blowtank vent
U	BL	BPA002C	5F washer hood exhaust fan
U	BL	BPR016	#5 post ClO2 washer W wall vent
U	BL	BPA002B	4F washer hood exhaust fan
U	BL	BPR013	roof exh fan on penthse-North (HCE/hypo)
U	BL	BPR011	roof exh fan on penthse-South (HCE/hypo)
U	BL	BPR010	roof exh fan over #4 post hypo
U	BL	BPA001E	1F washer seal tank vent
U	BL	BPA001F	2F washer seal tank vent
U	BL	BP013	#4 washer filtrate tank vent
U	BL	BP012	#4 washer feed tank vent
U	BL	BPR022	roof exh fan - North wall 1/1A penthouse
U	BL	BPA001A	3F washer seal tank vent
U	BL	BPR027	roof exh fan - South wall penthouse West
U	BL	BPR026	roof exh fan - South wall penthouse Mid
U	BL	BPR028	HCE cell evacuation vacuum exhaust
U	BL	BPR025	roof exh fan - South wall penthouse Mid
U	BL	BPR024	roof exh fan - South wall penthouse East
U	BL	BP002	post HCE stock tank vent
U	BL	BPA008	#4F-1 HCE seal tank
U	BL	BPA001B	5F washer seal tank vent
U	BL	BPA005	#3 washer seal tank overflow sewer
U	BL	BPR018	ClO2 tower scrubber exh
U	BL	BPA015	5A,1F,2F vacuum pump exhaust
U	BL	BPA002H	3 washer hood exhaust fan
U	BL	BPA010	sewerbox CCE washer sealtank
U	BL	BPA014	combined HCE seal tank vent
U	BL	BPR023	"old screen tank" w/Cl2 scrubber vent
U	BL	BP009	exh fan-S side 2R floor-West
X	BL	BPA011	6F tray caustic tank vent
X	BL	BP014	caustic tank drain

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
X	BL	BPA002A	3F washer hood exhaust fan
X	BL	BPA007A	#1 hemi caustic tank
X	BL	BPR015	#5 post ClO2 washer E wall vent
X	BL	BPR019	mild E tower vent
X	BL	BPA013	detergent storage tank
X	BL	BPA001C	6F washer seal tank vent
X	BL	BPA002G	5A washer hood exhaust fan
X	BL	BPR021	Cl2 tower stock line vacuum breaker-West
X	BL	BP001	#5 post ClO2 washer seal tank vent
X	BL	BPA007	Hemi,weak caustic storage tank vent
X	BL	BPR020	Cl2 tower stock line vacuum breaker-East
U	CD	BP003	ClO2 plant chlorate tank vent
U	CD	BP006	ClO2 plant methanol tank vent
U	CD	BP006A	ClO2 plant scrubber exhaust
U	CD	BP004	ClO2 plant chlorate solution tank vent
X	CD	BP005	ClO2 plant H2SO4 tank vent
U	EN	RB034	recovery sewer manhole
U	EN	DIG013	sewer vent SW of hot SSL tank
U	EN	ENV009	#8 pump station containment pond
U	EN	MF002	#10 SSPS open top
U	EN	ENV013	flume
U	EN	ENV012	sludge press
U	EN	ENV015	lime storage silo vent
U	EN	ENV002	milk of lime tank vent
U	EN	AP005	#1 pump station bar screen
U	EN	BPA009	sewer vent by HD stock tank
U	EN	ENV010	cinder system underlflow pond
U	EN	ENV008	#8 pump station manhole
U	EN	ENV007	#3 pump station overflow pond
U	EN	ENV006	cinder screening system
U	EN	ENV005	aeration stabilization basin
U	EN	ENV004	primary clarifier
U	EN	ENV003	#3 ps manhole
U	EN	AP004	drain vent by soda ash tank
X	EN	MF006	sewer vent at NE corner Fourdrinier
X	EN	ENV014	discharge gate sump
U	LF	LF001	offsite landfill - Yulee
U	MF	MF015	bailer
U	MF	MF014	beater
X	MF	MF011	stuff box vent south
X	MF	MF010	stuff box vent north
X	MF	MF008	machine dry end #2
X	MF	MF009	machine dry end #3
X	MF	MF007	machine dry end #1
X	MF	MF013	machine wet end #2
X	MF	MF012	machine wet end #1
X	MF	MF005	machine wet end #5
X	MF	MF004	machine wet end #4
X	MF	MF003	machine wet end #3
X	MF	MF001E	finishing room roof vent #2
X	MF	MF001D	finishing room roof vent #1
X	MF	MF001C	finishing room wall vent #3

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
X	MF	MF001B	finishing room wall vent #2
X	MF	MF001A	finishing room wall vent #1
X	MF	MF001F	finishing room roof vent #3
T	PG	AP001	AP test sink hood exhaust fan
U	PG	AP008	ammonium bisulfite standpipe
U	PG	AP014	unwashed stock tank
U	PG	DIG012	chip fill cyclone relief
U	PG	BPA003	#2 RSW seal tank overflow
X	PG	AP002	sulfur burner room roof vent
X	PG	DIG011	digester press relief line #5
X	PG	AP006	sewer vacuum breaker blowgas condenser
X	PG	AP009	acid plant cooling tower exhaust
X	PG	DIG009	digester press relief line #3
X	PG	DIG010	digester press relief line #4
X	PG	AP007	HP accumulator pressure relief
X	PG	DIG001	dig bldg roof exh fan-west wall
X	PG	DIG002	roof exh fan ceiling #1 - north
X	PG	BPA006	2 wall exh fans over #1 RSW
X	PG	DIG003	roof exh fan ceiling #2
X	PG	DIG004	roof exh fan ceiling #3
X	PG	DIG005	roof exh fan ceiling #4
X	PG	DIG006	roof exh fan ceiling #5
X	PG	DIG007	digester press relief line #1
X	PG	DIG008	digester press relief line #2
U	SC	BP007	outside knot drainer
U	SC	BPR002	roof exh fan over sidehills
U	SC	BPR003	roof exh fan over Cowan screens
U	SC	BPR004	roof exh fan over knot press & Cowans
U	SC	BPR001	roof exh fan over knotters
U	SC	BPR008	roof exh fan over Bauer cleaners (west)
U	SC	BPR007	roof exh fan over Bauer cleaners (east)
U	SC	WY007	knot pile
U	SC	WP001	Graver clarifier
U	SC	BPA004	open top unblch unscrn storage tank
X	SC	BP010	unbleached stock tank vent
X	SC	BPA012	screenroom defoamer tank
X	SC	BPR006	tile tank vent box
X	SC	BPR005	roof exh fan over Jonsson knotters
T	UT	RB036	recovery floor wall vents
T	UT	RB035	recovery steam vent
T	UT	RB005	steam blowbown flashtank vent
U	UT	RB017	HCE filter vent
U	UT	RB019	recovery scrubber holdup tank vent
U	UT	RB028B	Brinks filter water drain vent 8"
U	UT	RB028A	Brinks filter water drain vent 6"
U	UT	RB039	HCE holding pond
U	UT	RB038	SSL holding pond
U	UT	RB033	recovery boiler fuel oil day tank vent
U	UT	RB027	hypo tank cooling tower treatment tank vent
U	UT	RB025	large oil storage tank vent
U	UT	RB024	HCE cooling tower exhaust
U	UT	RB023	SSL cooling tower exhaust

ATTACHMENT 1
LIST OF EMISSION UNITS INCLUDED IN THIS APPLICATION

EMU Type	EM Unit	Vent nr	Name
U	UT	RB015	vacuum evap barometric condenser
U	UT	RB021	recovery fluegas quench drain
U	UT	PH002	cinder sluice system
U	UT	RB018	recovery scrubber holdup tank vent
U	UT	RB001	weak HCE storage tank vent
U	UT	RB016	HCE filter surge tank vent
U	UT	RB014	A-line sour condensate tank vent
U	UT	RB013	B-line sour condensate tank vent
U	UT	RB012	HCE evap feed tank vent
U	UT	RB009	main evap condensate hotwell
U	UT	RB006	stripper heater condensate tank vent
U	UT	RB004	weak SSL tank vent
U	UT	WP002	accelator tank vent
U	UT	PH003	power house oil day tank vent
U	UT	RB022	recovery scrubber holdup tank vent
X	UT	RB029	Calgon Orlene PC341 tank vent
X	UT	PH001B	B scrubber holdup tank - open
X	UT	RB003	heavy SSL tank (north)
X	UT	RB037	thick HCE storage tank vent
X	UT	RB032	Calgon Conquor 3470 tank vent
X	UT	WP005	demineralizer caustic tank vent
X	UT	RB030	Calgon Conquor 3583 tank vent
X	UT	PH001A	A scrubber holdup tank - open
X	UT	RB026	Betz 40K cooling tower chemical tank vent
X	UT	RB020	recovery scrubber direct contact condenser
X	UT	RB011	caustic mix tank for shutdowns vent
X	UT	PH005	Calgon Boilerguard 4520 tank vent
X	UT	RB008	B-line main evap condensate tank vent
X	UT	RB007	A-line main evap condensate tank vent
X	UT	RB002	heavy SSL tank vent, (south)
X	UT	PH004	Calgon Pretech 32 tank vent
X	UT	WP004	demineralizer H2SO4 tank vent
X	UT	PH007	Surex defoamer tank vent
X	UT	PH006	Calgon Conquor 3583 tank vent
X	UT	RB031	Calgon Burolok 2220 tank vent
X	UT	RB010	vacuum evap condensate hotwell
U	VS	AP013	hot SSL storage tank
U	VS	AP012	filtered SSL tank
T	WY	WY003	locker room exhaust fan
U	WY	WY001	chip pit blower
U	WY	WY006	bark pile
U	WY	WY004	chip pile
U	WY	WY002	chip storage building exhaust fan
X	WY	WY005	conveyors

ATTACHMENT 2
List of Applicable Requirements for the Facility

Federally Enforceable Regulations Applicable to the Entire Facility

40CFR61.145
40CFR61.148
40CFR61.150
40CFR61.153
40CFR80.29
40CFR80.30
62-103.150
62-103.155
62-210.300(1)
62-210.300(2)
62-210.300(3)(a)
62-210.300(3)(b)
62-210.300(5)
62-210.300(6)
62-210.350(1)
62-210.350(2)
62-210.350(3)
62-210.360
62-210.370(3)
62-210.550
62-210.550
62-210.650
62-210.700(1)
62-210.700(2)
62-210.700(3)
62-210.700(4)
62-210.700(6)
62-210.900(1)
62-210.900(5)
62-212.300
62-212.400
62-212.600
62-213.205
62-213.400
62-213.410
62-213.412
62-213.420
62-213.430
62-213.440
62-213.460
62-213.900(1)
62-256
62-257
62-4.030
62-4.040
62-4.050
62-4.055
62-4.060
62-4.070
62-4.080
62-4.090
62-4.100
62-4.110
62-4.120
62-4.130
62-4.150
62-4.160
62-4.210
62-4.220

ATTACHMENT 2

State Only Enforceable Applicable Regulations Applicable to the Entire Facility

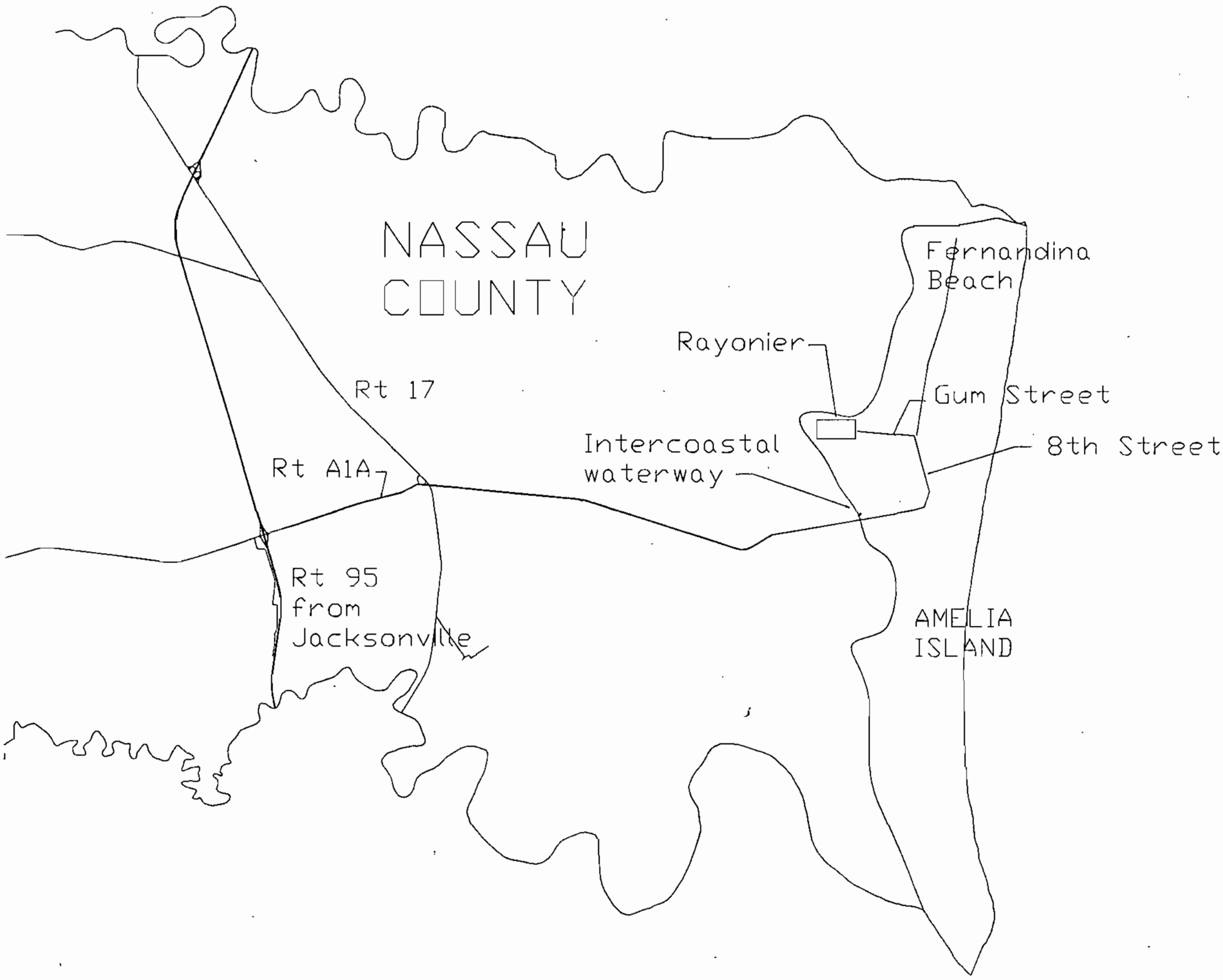
62-296.320(2)

ATTACHMENT 3

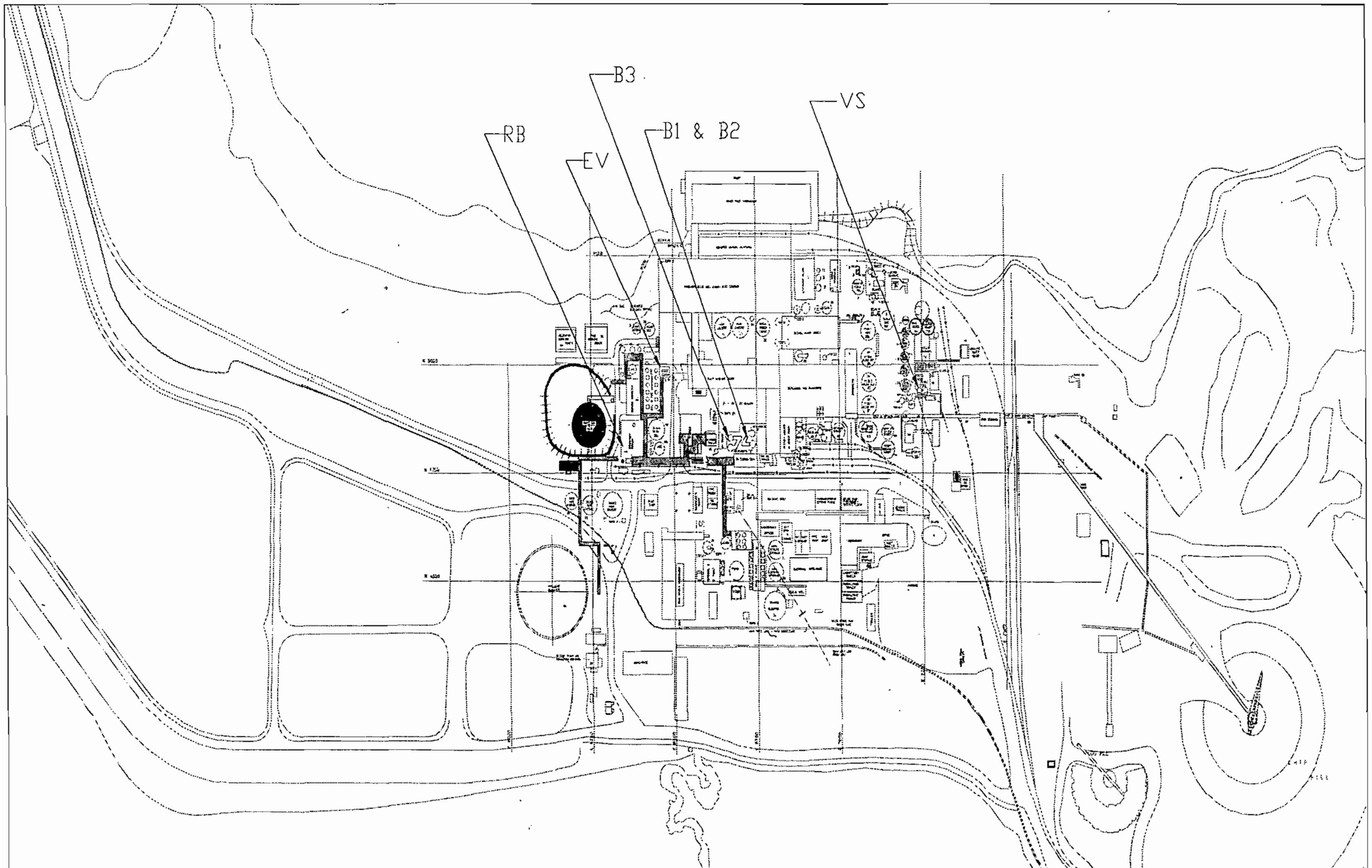
List of Pollutants Emitted from the Facility

PM10	(Particles)	A
SO2	(Sulfur Dioxide)	A
NOx	(Nitrogen Dioxide)	A
CO	(Carbon Monoxide)	A
VOC	(Volatile Organic Compounds)	A
H115	(Methanol)	A
H038	(Chlorine)	A
H043	(Chloroform)	A
PB	(Lead)	B
H047	(Colbalt)	B
H120	(MEK)	A
H001	(Acetaldehyde)	A
H106	(HCl)	B
H095	(Formaldehyde)	B
H006	(Acrolein)	B
H118	(Chloromethane)	B
H163	(Styrene)	B
CFC	(total CFCs)	B
H128	(Methylene chloride)	B
H033	(Carbon Tetrachloride)	B
H017	(Benzene)	B
H123	(Methyl Isobutyl Ketone)	B
H169	(Toluene)	B
H041	(Chlorobenzene)	B
H085	(Ethyl benzene)	B
H187	(Xylene)	B
H166	(1,1,2,2-tetrachloroethane)	B
H061	(1,4, dichlorobenzene)	B
H174	(1,2,4-trichlorobenzene)	B
H165	(TCDD)	B
H2S	(Hydrogen sulfide)	B
H167	(Tetrachloroethene)	B
H176	(Trichloroethylene)	B
H119	(1,1,1-trichloroethane)	B
H104	(Hexane)	B
H0323	(Carbon disulfide)	B
H117	(Bromomethane)	B
	(Chlorine dioxide)	A
H113	(Manganese)	B
H114	(Mercury)	B
H133	(Nickel)	B
H148	(Phosphorous)	B

ATTACHMENT 4
AREA MAP

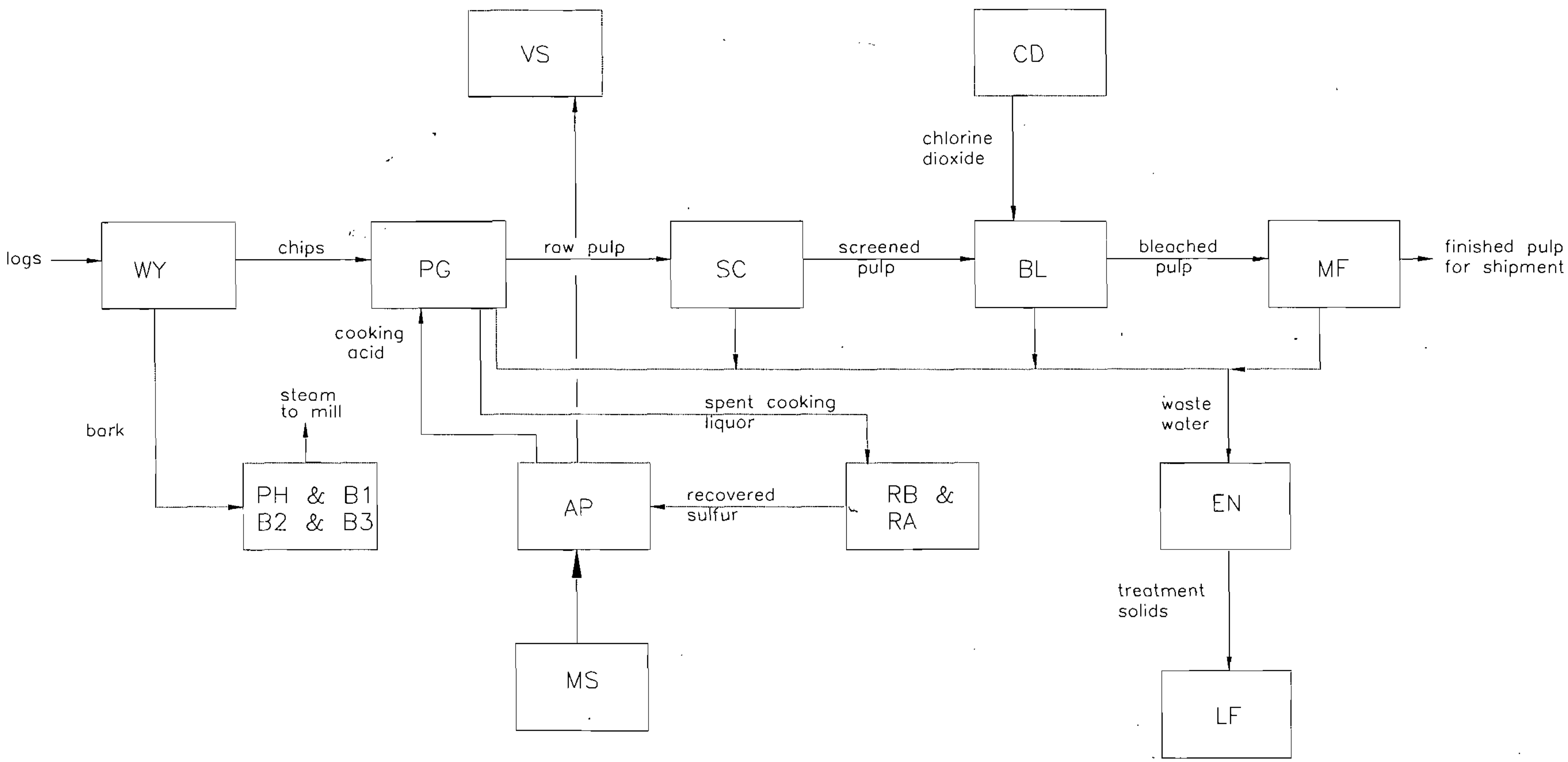


Best Available Copy



ATTACHMENT 5
FACILITY PLOT PLAN

ATTACHMENT 6
PROCESS FLOW DIAGRAM



ATTACHMENT 7
PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The following emission points have fugitive particulate emissions. These fugitive emissions are controlled as indicated.

Em Pt	Emission Name	Description and Control Measures
WY001	chip pit blower	Fresh chips are pneumatically conveyed to a chip pile by a blower. It is important that fines be kept to a minimum because small chips and dust do not produce desirable fiber length. Short fiber is lost through screens and contributes to lost production. Therefore chipping technology minimizes the production of fines. Also chips are made from freshly cut pine trees having a moisture content of about 50%. This moisture aids in keeping any dust that might be made airborne.
WY004	chip pile	For all of the reasons given above, there are few fines in the chip pile. Also, frequent rains keep the chip pile sufficiently wet to control windborne particulate.
WY006	bark pile	Bark has at least 50% moisture and is created in large pieces. Some of the bark must be hogged before burning. Therefore little becomes airborne from the pile. Furthermore, frequent rains maintain the pile at sufficient moisture to suppress dusting.
AP003	molten sulfur handling area	Fugitive emissions from molten sulfur handling areas are regulated by FAC 62-296.411. These rules require curbing and drip pans at unloading areas. Cleanup of spills must occur periodically. Logs must be kept on spills. All of these actions are implemented. They provide the means of minimizing the release of unconfined particulate matter from this source.

ATTACHMENT 8
FUGITIVE EMISSION IDENTIFICATION

The following sources are considered fugitive sources:

Fugitive Pollutants	EM Unit	Vent nr	Name
VOC,CHCl3,	BL	BPA005	#3 washer seal tank overflow sewer
VOC	BL	BP014	caustic tank drain
VOC,MEOH,AcHO	EN	ENV007	#3 pump station overflow pond
SO2	EN	DIG013	sewer vent SW of hot SSL tank
VOC,MEOH,H2S	EN	ENV004	primary clarifier
VOC,MEOH,CHCl3,H2S	EN	ENV006	cinder screening system
VOC,MEOH	EN	ENV009	#8 pump station containment pond
VOC,MEOH,CHCl3,H2S	EN	ENV010	cinder system underlflow pond
VOC,MEOH,H2S	EN	ENV012	sludge press
VOC,MEOH,CHCl3	EN	ENV013	flume
VOC,CHCl3	EN	ENV014	discharge gate sump
PM	EN	ENV015	baghouse controlled lime emissions
SO2,VOC,MEOH,CHCl3,ClO2	EN	AP005	#1 pump station bar screen
VOC	EN	BPA009	sewer vent by HD stock tank
VOC,MEOH,AcCO	EN	MF002	#10 SSPS open top
VOC,MEOH,CHCl3,H2S	EN	ENV005	aeration stabilization basin
VOC, H2S,PM	LF	LF001	offsite landfill - Yulee
PM	MS	AP003	molten sulfur handling area
VOC,MEOH,SO2	PG	BPA003	#2 RSW seal tank overflow
VOC,SO2	SC	WY007	knot pile
VOC,SO2,MEOH	SC	BPA004	open top unblch unscrn storage tank
VOC,MEOH	SC	WP001	Graver clarifier
SO2,VOC,MEOH	SC	BP007	outside knot drainer
SO2,MEK,AcHO,MEOH	UT	RB038	SSL holding pond
VOC,MEOH,CHCl3,H2S	UT	PH002	cinder sluice system
VOC,MEOH	UT	RB009	main evap condensate hotwell
VOC,SO2	UT	RB021	recovery fluegas quench drain
MEOH,VOC	UT	RB039	HCE holding pond
VOC,MEOH	UT	RB010	vacuum evap condensate hotwell
PM,VOC	WY	WY001	chip pit blower
VOC	WY	WY005	conveyors
VOC,PM	WY	WY006	bark pile
VOC,PM	WY	WY004	chip pile

ATTACHMENT 9
LIST OF PROPOSED INSIGNIFICANT ACTIVITIES

The following sources are proposed as exempt, and as such are not required to be further classified or described in this application:

EM Unit	Vent nr	Name	Exempt Just
BL	BPA013	detergent storage tank	Tergetal - low vapor pressure per MSDS
BL	BPA001C	6F washer seal tank vent	HAP measures below threshold
BL	BPA002A	3F washer hood exhaust fan	VOC measures nondetect
BL	BPA002G	5A washer hood exhaust fan	VOC measures below threshold
BL	BPA007	Hemi,weak caustic storage tank vent	{
BL	BP001	#5 post ClO2 washer seal tank vent	CO & ClO2 measurements below thresholds, no VOC expected
BL	BPR021	Cl2 tower stock line vacuum breaker-	VOC,chloroform and flow measured at nondetect
BL	BPR020	Cl2 tower stock line vacuum breaker-East	VOC,chloroform and flow measured at nondetect
BL	BPR019	mild E tower vent	VOC measured below threshold
BL	BPR015	#5 post ClO2 washer E wall vent	VOC and CO measured below threshold
BL	BPA007A	#1 hemi caustic tank	{
BL	BPA011	6F tray caustic tank vent	methanol measured below threshold
BL	BP014	caustic tank drain	VOC measures below threshold
CD	BP005	ClO2 plant H2SO4 tank vent	Assume no organic contaminants, H2SO4 not regulated
EN	ENV014	discharge gate sump	surface area <1% of ASB surface area, late in treatment system, VOC emission
MF	MF011	stuff box vent south	similar vents measure less than threshold
MF	MF010	stuff box vent north	similar vents measure less than threshold
MF	MF008	machine dry end #2	VOC measured less than threshold
MF	MF009	machine dry end #3	VOC measured less than threshold
MF	MF007	machine dryend #1	VOC measured less than threshold
MF	MF001A	finishing room wall vent #1	VOC measured less than threshold
MF	MF013	machine wet end #2	VOC measured less than threshold at similar mill
MF	MF001E	finishing room roof vent #2	VOC measured less than threshold
MF	MF012	machine wet end #1	VOC measured less than threshold at similar mill
MF	MF005	machine wet end #5	VOC measured less than threshold
MF	MF004	machine wet end #4	VOC measured less than threshold
MF	MF003	machine wet end #3	VOC measured less than threshold
MF	MF001F	finishing room roof vent #3	VOC measured less than threshold
MF	MF001B	finishing room wall vent #2	VOC measured less than threshold
MF	MF001C	finishing room wall vent #3	VOC measured less than threshold
MF	MF001D	finishing room roof vent #1	VOC measured less than threshold
MF	MF006	sewer vent at NE corner Fourdrinier	VOC monitoring above similar waste water measures less than threshold
PG	DIG011	digester press relief line #5	Normally closed safety valve
PG	DIG001	dig bldg roof exh fan-west wall	Operating area ventilation, SO2 level estimate below threshold
PG	AP002	sulfur burner room roof vent	Operating area ventilation, SO2 level estimate below threshold
PG	DIG002	roof exh fan ceiling #1 - north	Operating area ventilation, SO2 level estimate below threshold
PG	AP006	sewer vacuum breaker blowgas	HAP mostly nondetect, normally negative flow
PG	AP007	HP accumulator pressure relief	Safety device
PG	DIG003	roof exh fan ceiling #2	Operating area ventilation, SO2 level estimate below threshold
PG	AP009	acid plant cooling tower exhaust	Fresh water cooling device, no contaminated inputs
PG	DIG010	digester press relief line #4	Normally closed safety valve
PG	DIG004	roof exh fan ceiling #3	Operating area ventilation, SO2 level estimate below threshold
PG	DIG005	roof exh fan ceiling #4	Operating area ventilation, SO2 level estimate below threshold
PG	DIG006	roof exh fan ceiling #5	Operating area ventilation, SO2 level estimate below threshold
PG	DIG007	digester press relief line #1	Normally closed safety valve
PG	DIG008	digester press relief line #2	Normally closed safety valve
PG	DIG009	digester press relief line #3	Normally closed safety valve

ATTACHMENT 9
LIST OF PROPOSED INSIGNIFICANT ACTIVITIES

continued from previous page

EM Unit	Vent nr	Name	Exempt Just
SC	BP010	unbleached stock tank vent	VOC measured below threshold
SC	BPR006	tile tank vent box	VOC measured below threshold
SC	BPR005	roof exh fan over Jonsson knotters	VOC measured below threshold
SC	BPA012	screenroom defoamer tank	neg. vapor pressure per MSDS
UT	RB002	heavy SSL tank vent, (south)	VOC & HAPs measured less than threshold
UT	RB011	caustic mix tank for shutdowns vent	VOC measured less than threshold
UT	RB003	heavy SSL tank (north)	VOC & HAPs measured less than threshold
UT	RB037	thick HCE storage tank vent	VOC measured below threshold
UT	RB032	Calgon Conquor 3470 tank vent	aqueous solution of soluble substance per MSDS
UT	RB031	Calgon Burolok 2220 tank vent	low vapor pressure per MSDS
UT	RB030	Calgon Conquor 3583 tank vent	aqueous solution of soluble substance per MSDS
UT	RB029	Calgon Orlene PC341 tank vent	no indication of high vapor pressure on MSDS
UT	WP004	demineralizer H2SO4 tank vent	Assume no organic contaminants, H2SO4 not regulated
UT	RB020	recovery scrubber direct contact	VOC measures less than threshold
UT	PH001A	B scrubber holdup tank - open	Measured HAPs below threshold
UT	RB010	vacuum evap condensate hotwell	VOC & HAPS measured less than threshold
UT	RB008	B-line main evap condensate tank vent	VOC & HAPs measured less than threshold
UT	RB007	A-line main evap condensate tank vent	VOC & HAPs measured less than threshold
UT	PH001B	B scrubber holdup tank - oper	Measured HAPs below threshold
UT	WP005	demineralizer caustic tank vent	Assume no organic contaminants, NaOH not regulated
UT	PH007	Sure defoamer tank vent	{
UT	PH006	Calgon Conquor 3583 tank vent	{No VOC on MSDS
UT	PH005	Calgon Boilerguard 4520 tank vent	low vapor pressure per MSDS
UT	PH004	Calgon Pretech 32 tank vent	high boiling point per MSDS
UT	RB026	Betz 40K cooling tower chemical tank	low vapor pressure per MSDS
WY	WY005	conveyors	mechanical conveying of wet material with few drop points

ATTACHMENT 10
LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE IV

There is only one unit affected by EPA chlorofluorocarbon rules:

1. Annex Chiller - York Screw Chiller, Model YSFCFAS5-CVAS
   Refrigerant 22, capacity 1900 lbs
   Cooling Capacity - 600 tons

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

ALTERNATE OPERATING SCENARIOS FOR PULPING EMISSION UNIT

Background

Batch digesters are operated sequentially and continuously to produce as even a flow of pulp to the rest of the mill as possible. Most of the following mill operations are continuous. Flow from the batch digesters is equalized by storing pulp in the blow pits. Blow pits are tanks into which the hot pulp is forced by residual pressure remaining in the digester.

Digesters go through a number of cycles each day as each one cooks its batch of chips into pulp and blows that cook into a blow pit. The steps in each cycle are:

(1) Filling - First the digester is filled with chips from the chip storage building. After capping, the digester is filled with cooking acid.

(2) Cooking - Steam is indirectly added to the filled digester and when at temperature and pressure the chips are held at temperature and pressure for a specified period of time.

(3) Drag down - During this period the temperature and pressure inside the digester are gradually reduced and the gases sent to the Acid Plant Recovery system to recover cooking chemicals, predominately sulfur dioxide and heat.

(4) Blow - Residual pressure inside the digester forces the hot pulp into the blow pit.

These steps require a total of 325 minutes per batch. With the existing 5 digesters at the Fernandina Beach facility, there are a total of 7200 digester minutes available per day. Since the total cycle time for each batch is 325 minutes, using 5 digesters the mill can produce about 22 batches a day.

5 digesters x 24 hours/day x 60 minutes /hr = 7200 digester minutes/day

$$\frac{\text{7200 digester minutes/day}}{\text{325 digester-minutes/batch}} = \text{22.1 batches/day}$$

However, the quickness at which a digester is prepared for cooking after a blow is monitored by digester spacing. This is the time allowed between each digester in sequence and therefore controls the rate at which the digesters as a system operate.
Digester spacing historically as been about 65 minutes. Although at times it has been longer because the digester can not be readied in time or other factors in the mill slow the entire process and digester spacing increases which reduces production.

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

A Modification to Title V Permit 0890004-010-AC was made on February 5, 2002, that recognized an Alternate Method of Operation involving digesters. The addition of a 6th digester allowed for removing a digester from service without loss of production. Significant rebricking was anticipated. The Alternate Operating Method provided for a slower digester operation thereby not achieving the production and consequent emissions that adding another digester would achieve. This slower operating rate would increase quality. Below is the description of the Scenarios.

Alternate Operating Scenario #1

This Alternate Operating Scenario anticipates the use of six digesters. Because Rayonier has committed to totally rebricking all of its existing four brick-lined digesters, each one of the existing digesters will be removed from service and number 6 digester will replace that digester in its sequence. This is a continuation of the normal operation for the Fernandina Beach mill since 1952 when number 5 digester was installed.

Alternate Operating Scenario #2

This Alternate Operating Scenario uses all six digesters. This is the mode of operation that will be used until digester rebricking begins and between rebricking each digester. Rebricking is expected to begin in 1999 when 2 digesters will be rebricked with the remaining digester being rebricked during 2000 (#4 digester was rebricked in 1994). Continuous operation of the new number 6 digester is necessary once the acid resistant/refractory brick is cured as hot and cold cycles cause premature refractory failure. Curing is scheduled for June 1998. Thus this Scenario will be used until the first digester is taken off line for rebricking.

When all six digesters are available, the total cycle time will be increased from the normal 325 minutes to 390 minutes. This will maintain the same number of potential batches possible with five digesters.

6 digesters x 24 hr/day x 60 minutes/ hr = 8640 digester-hours/day

$$\frac{\text{8640 digester-hours/day}}{\text{390 minute/batch}} = \text{22.1 batches/day}$$

Potential emissions should not increase since the total number of batches possible will not increase. Some of the additional cycle time will be used to increase cooking time and some will be used to increase drag-down time and some will be used to increase digester spacing. Though the potential emissions will not change in switching between these two Alternate Operating Scenarios, actual emissions of some pollutants will decrease slightly and some could increase slightly.

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

The longer drag down time will lower the blow pressure and thus liberate more of the sulfur dioxide to the recovery system reducing the sulfur dioxide load to the vent gas scrubber. The longer cycle time planned will allow a slower, less harsh cooking which should increase the molecular weight of the broken lignin molecule fragments that result from cooking. These larger molecules will have lower vapor pressure and higher boiling point and thus the VOCs will not evaporate so readily. Also higher yields from a given quantity of chips should be possible because the less harsh cooking conditions will destroy less cellulose.

With only five digesters, the maximum number of batches possible is 22 as can be seen from the above calculations. However, this is not always achievable with five digesters as various little delays increase spacing and thereby decrease the number of batches cooked per day. Use of six digesters instead of five should increase the actual number of batches cooked per day because more digesters will make for a smoother operation and allow more time to deal with the minor delays without missing scheduled cook time. Thus the actual number of digesters cooked may increase slightly, but overall emissions are not expected to increase significantly.

Regulations regarding Alternate Operating Scenarios require the source to keep records of when each Scenario is being used. Further, to ensure the digester system operation is limited to less than a significant increase in pollutants, additional recordkeeping will be required. The digester log contains sufficient information to satisfy both of these requirements. The number of digesters operating and the digester spacing are both recorded on this log, therefore the required monitoring data will be maintained and available if requested by the agency.

This Alternate Operating Method of Operation was further interpreted in the letter, a copy of which is inserted on the next 2 pages.

ATTACHMENT 11
ALTERNATE METHODS OF OPERATION

February 27, 2001

Certified Mail, Return Receipt Requested

Mr. Christopher Kirts
Department of Environmental Protection
7825 Bay Meadows Way, Suit B200
Jacksonville, FL 32256-7577

RE: Alternate Operating Scenario for Digester Emission Unit Group
Fernandina Dissolving Sulfite Mill, Fernandina Beach, FL
Title V Permit Number 08900004-005AV

Dear Mr. Kirts:

On June 1, 1998 Rayonier submitted a letter reporting that it was adding an additional digester at its Fernandina Beach, FL dissolving sulfite pulp mill in order to facilitate the re-bricking of its digesters. As you will recall, this is a safety issue for the industry following the digester explosion at Panama City, FL. More frequent re-bricking was considered necessary to address these safety concerns. In order not to lose at least 20% of its production during these lengthy re-bricking projects Rayonier decided to add the new digester to replace the production lost by the digester taken out of service. Recognizing that there were times when no digester was out of service Rayonier indicated that it was limiting the operation of all its digesters in order to avoid any NSR (PSD) implications.

Specifically, when a digester was out for maintenance the new digester would function like one of the regular, existing digesters. There would be no concerns about modification nor increase in emissions in this case. At other times, when all 6 digesters were available for use, all digesters would be controlled by limiting the time between digesters. This ensured that they operated at the same rate as when there were only 5 digesters. That is, that digester operation would be limited to 22.1 digesters per day. These two cases were presented as Alternate Operating Scenarios in a modification to the application to the Title V permit for the facility.

In the same June 1 letter, we indicated that having 6 digesters would allow occasional days to have more digesters than 22. We have now re-evaluated this in the light of operating experience and find that any potential emission increase associated with digester operation should be limited by the significance levels in the PSD program. To avoid PSD permitting this equipment should not increase emissions by more than these significance levels, and thereby avoid being a modification. These significance levels are about 2.3% of the reported emissions in 1996. The highest production in the past several years prior to installation of the number 6 digester was

149,957 ADMT/year. Assuming that emissions directly follow production, a 2.3% increase in production would limit production to 153,400 ADMT/year.

Though this production rate has never been achieved, Rayonier will be regarding this as a limit to avoid PSD permitting for the addition of number 6 digester. This shifts the enforcement parameter for this Alternative Operating Scenario from limiting the number of digesters per day to limiting total annual production. Obviously production is a closely followed number and Rayonier will control its operation to less than 153,400 ADMT/yr.

If you have questions regarding this matter please contact David Tudor at (904) 277-1452 or E-mail at david tudor@rayonier.com.

Yours very truly,

W. Michael Burch
General Manager

MWB/dig6AltOpsScenAnnual

ATTACHMENT 12
RISK MANAGEMENT PLAN VERIFICATION

Facility Name: Rayonier Fernandina Beach Dissolving Sulfite Mill
EPA ID: 1000 0005 0972

EPA United States Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

June 24, 1999

Larry Coleman
Rayonier
Foot of Gum Street
Fernandina Beach, FL 32034

EPA Facility ID#:	**1000 0005 0972**
Postmark Date:	**06/15/1999**
Anniversary Date:	**06/15/2004**

<u>NOTIFICATION LETTER: COMPLETE RMP</u>

The U.S. Environmental Protection Agency (EPA) received your Risk Management Plan (RMP) dated with the above postmark date. **This letter notifies you that your RMP is "complete" according to EPA's completion check.** The completion check is a program implemented by EPA to determine whether a submitted RMP includes the minimum amount of information every RMP must provide. The completion check does not assess whether a submitted RMP should have provided additional information or whether the information it provides is accurate or appropriate. In other words, it does not indicate that the RMP meets the requirements of 40 CFR Part 68.

Please note the anniversary date indicated above. Your RMP must be revised and updated by this date or earlier as required by 40 CFR §68.190. Please also note your EPA Facility ID number as identified at the top of this letter; all future Risk Management Plan submissions, corrections and other correspondence must include this number.

Your RMP (excluding the Offsite Consequence Analysis data) can be viewed on RMP*Info™, a national database on the Internet at http://www.epa.gov/enviro.

Facility Name: Rayonier Fernandina Beach Dissolving Sulfite Mill
EPA ID: 1000 0005 0972

If you have any questions, please call one of the following numbers:

(1) For RMP rule interpretation questions, call the EPCRA Hotline at (800) 424-9346 or (703) 412-9810 (in the D.C. Metro area).

(2) For RMP*Submit installation and software questions, or information on the status of your RMP, contact the RMP Reporting Center at (703) 816-4434, or write to the:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA 22116-3346

(3) For more information on the Risk Management Program, you can contact your Implementing Agency. Your Implementing Agency is **Florida Department of Community Affairs, 2555 Shumard Oak Boulevard, Tallahassee, FL, 32399, Phone: 850-413-9970.**

Thank you for your cooperation in this matter.

Sincerely,

RMP Reporting Center

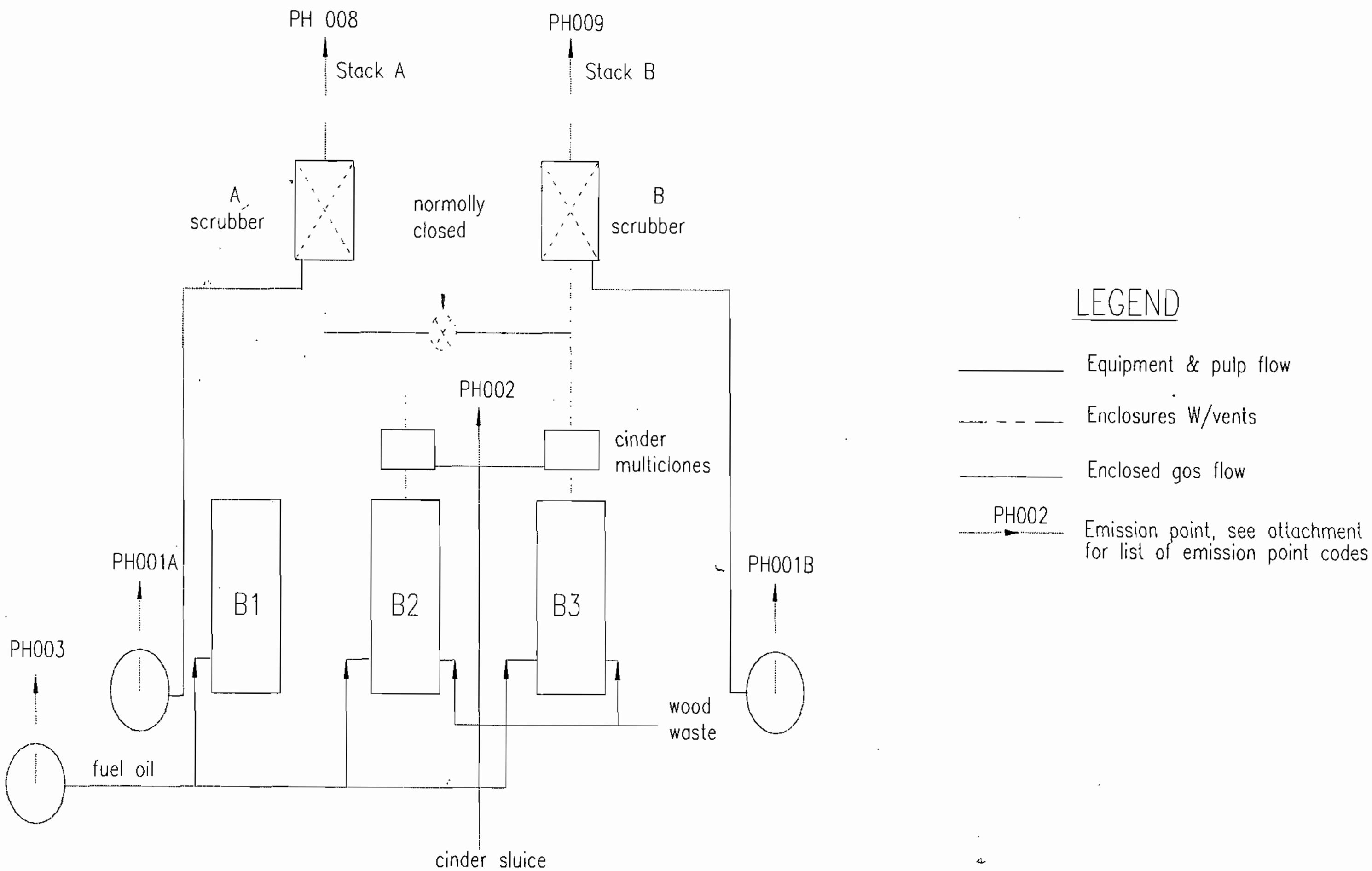
Enclosure:
Risk Management Plan (if submitted on paper)

ATTACHMENT 13
COMPLIANCE CERTIFICATION

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V source for which this report is being submitted. Subject to the conditions set forth in the Compliance report, Attachment 34, I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

______________________________ ____________
W. M. Burch Date

ATTACHMENT 14
B1, B2 AND B3 PROCESS FLOW DIAGRAM



ATTACHMENT 15
FUEL SPECIFICATIONS

The following represent typical fuel analyses for the fuels used at this source.

NR 6 FUEL OIL

Description:............................Standard, commercially available residual, nr 6, fuel oil.
density...................................8.25 lb/gal
heat value ....150,000 Btu/gal
percent Sulfur by weight........Not to exceed 2.5%
percent nitrogen by weight.....0.6%
percent ash by weight............0.03%
Additives ....None

RED LIQUOR

Description:............................evaporated spent sulfite liquor
density...................................10.01 - 10.84 lb/gal
percent solids 58%
heat value ....9330 Btu/lb dry basis
percent Sulfur by weight........6.9% dry basis
percent nitrogen by weight.....2.96% dry basis
percent ash by weight............0.5% dry basis
additives used:........................None

BARK

Description:............................Cork-like outside covering of trees, removed before logs are chipped, hogged and burned as fuel.
density...................................9 ODlb/cu ft approx. 50% moisture
heat value ....9030 Btu/OD lb, 4500 Btu/lb as is
percent Sulfur by weight........0.1%
percent nitrogen by weight.....unk
percent ash by weight............2.9%
Additives Used.......................None

ATTACHMENT 16
B1, B2, & B3 DESCRIPTION OF CONTROL EQUIPMENT

DESCRIPTION OF CONTROL EQUIPMENT

POWER BOILER STACKS A & B:

Each of the two combination wood waste and oil boilers have multi-cyclone units with no re-injection of fly-ash. Under normal operations power boilers 1 and 2 feed A scrubber and boiler 3 feeds B scrubber. The scrubbers are AirPol "Wet Approach" Venturi with a throat approximately 7.5 ft. diameter gas inlet by 22 ft. high round cross section. The Venturi pressure drop is up to 20 inches water pressure. The Cyclone Entrainment Separator is 17 ft. in diameter and 39 ft high. 7,500 gallon Scrubbing Liquid Recycle Tanks are used. The scrubbers have met the particulate emissions standards routinely since installed in 1975. Sulfur dioxide emissions are consistently controlled by utilizing fuel oil with 2.5% sulfur content or less.

ATTACHMENT 17
B1, B2 & B3 DESCRIPITION OF STACK SAMPLING FACILITIES

POWER BOILER STACKS A AND B:

For each stack there are two sample ports oriented at a 90 degree angle, 56.5 feet (5.5 stack diameters) from the stack discharge and 40 feet 4 stack diameters from any upstream changes in stack dimensions. A railed sampling platform for each stack with a bridge between stacks is provided along with a sampling equipment monorail for each port. Ladders with safety guards are provided to access the sampling platforms.

ATTACHMENT 18
B1, B2 & B3 ADDITIONAL APPLICABLE REQUIREMENTS

B1 - Permit AO45-183504

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1		Compliance will be demonstrated by monitoring fuel fired to this boiler and assuming 150000 Btu/gal heat content for the fuel.
Specific Condition 2	Keep	Compliance will be demonstrated by monitoring the operating rate during the test.
Specific Condition 3	Keep	Compliance will be demonstrated by examining daily fuel usage and dividing by 24 and comparing this number to the rate at the last test.
Specific Condition 4	Keep.	Compliance will be demonstrated by annual EPA method 5 stack tests. Surrogate monitoring parameters of scrubber gas pressure drop and liquid media supply flow and excess O2 will be used for continuous monitoring. (See CAM Plan - Attachment 19)
Specific Condition 5	Remove. This condition is not required to assure compliance with the emission limitation for this emission unit.	N/A
Specific Condition 6	Keep	Compliance is demonstrated by submittal of the required information.
Specific Condition 7	Remove. This is described in Attachment 17	N/A
Specific Condition 8	Remove. This condition is superseded by rule.	N/A
Specific Condition 9	Remove. This condition is superseded by rule.	N/A
Specific Condition 10	Remove. This condition is superseded by rule.	N/A
Specific Condition 11	Remove. This condition is superseded by rule.	N/A

ATTACHMENT 18
B1, B2 & B3 ADDITIONAL APPLICABLE REQUIREMENTS

B2 - Permit AO45-183506

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1	Keep.	Compliance will be demonstrated by monitoring fuel fired to this boiler and assuming 150000 Btu/gal heat content for the fuel.
Specific Condition 2	Keep	Compliance will be demonstrated by monitoring the operating rate during the test.
Specific Condition 3	Keep	Compliance will be demonstrated by examining daily fuel usage and dividing by 24. and comparing this number to the rate at the last test.
Specific Condition 4	Keep.	Compliance will be demonstrated by annual EPA method 5 stack tests. Surrogate monitoring parameters of scrubber gas pressure drop and liquid media supply flow and excess O2 will be used for continuous monitoring. (See CAM Plan - Attachment 19)
Specific Condition 5	Remove. This condition is not required to assure compliance with the emission limitation for this emission unit.	N/A
Specific Condition 6	Keep	Compliance is demonstrated by submittal of the required information.
Specific Condition 7	Remove. This is described in Attachment 17	N/A
Specific Condition 8	Remove. This condition is superseded by rule.	N/A
Specific Condition 9	Remove. This condition is superseded by rule.	N/A
Specific Condition 10	Remove. This condition is superseded by rule.	N/A
Specific Condition 11	Remove. This condition is superseded by rule.	N/A

ATTACHMENT 18
B1, B2 & B3 ADDITIONAL APPLICABLE REQUIREMENTS

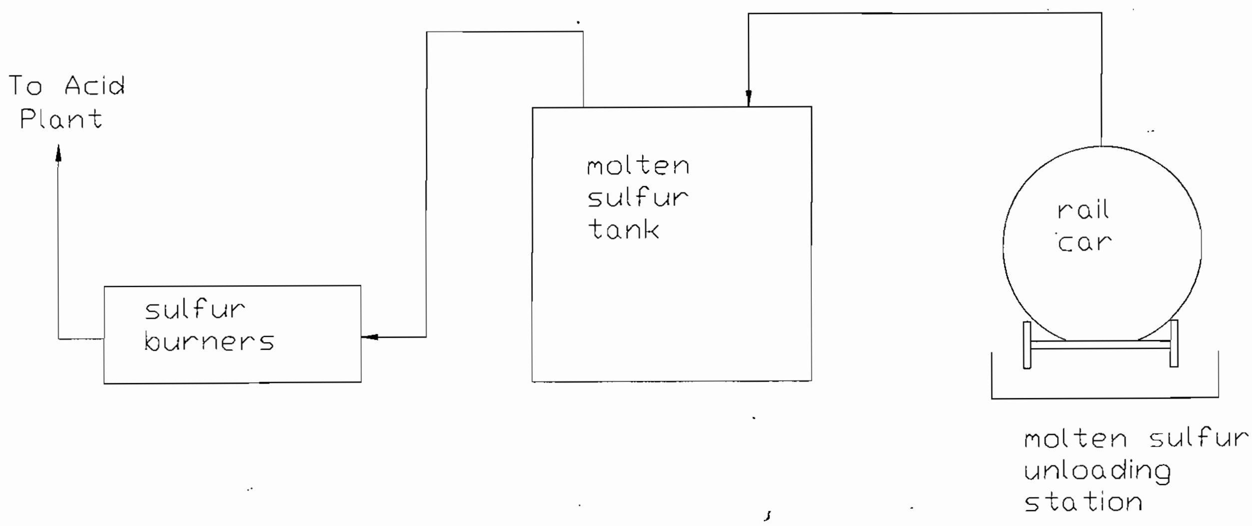
B3 - Permit AO45-183507

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1	Keep.	Compliance will be demonstrated by monitoring fuel fired to this boiler and assuming 150000 Btu/gal heat content for the fuel.
Specific Condition 2	Keep	Compliance will be demonstrated by monitoring the operating rate during the test.
Specific Condition 3	Keep	Compliance will be demonstrated by examining daily fuel usage and dividing by 24. and comparing this number to the rate at the last test.
Specific Condition 4	Keep.	Compliance will be demonstrated by annual EPA method 5 stack tests. Surrogate monitoring parameters of scrubber gas pressure drop and liquid media supply flow and excess O2 will be used for continuous monitoring. (See CAM Plan - Attachment 19)
Specific Condition 5	Remove. This condition is not required to assure compliance with the emission limitation for this emission unit.	N/A
Specific Condition 6	Keep	Compliance is demonstrated by submittal of the required information.
Specific Condition 7	Remove. This is described in Attachment 17	N/A
Specific Condition 8	Remove. This condition is superseded by rule.	N/A
Specific Condition 9	Remove. This condition is superseded by rule.	N/A
Specific Condition 10	Remove. This condition is superseded by rule.	N/A
Specific Condition 11	Remove. This condition is superseded by rule.	N/A

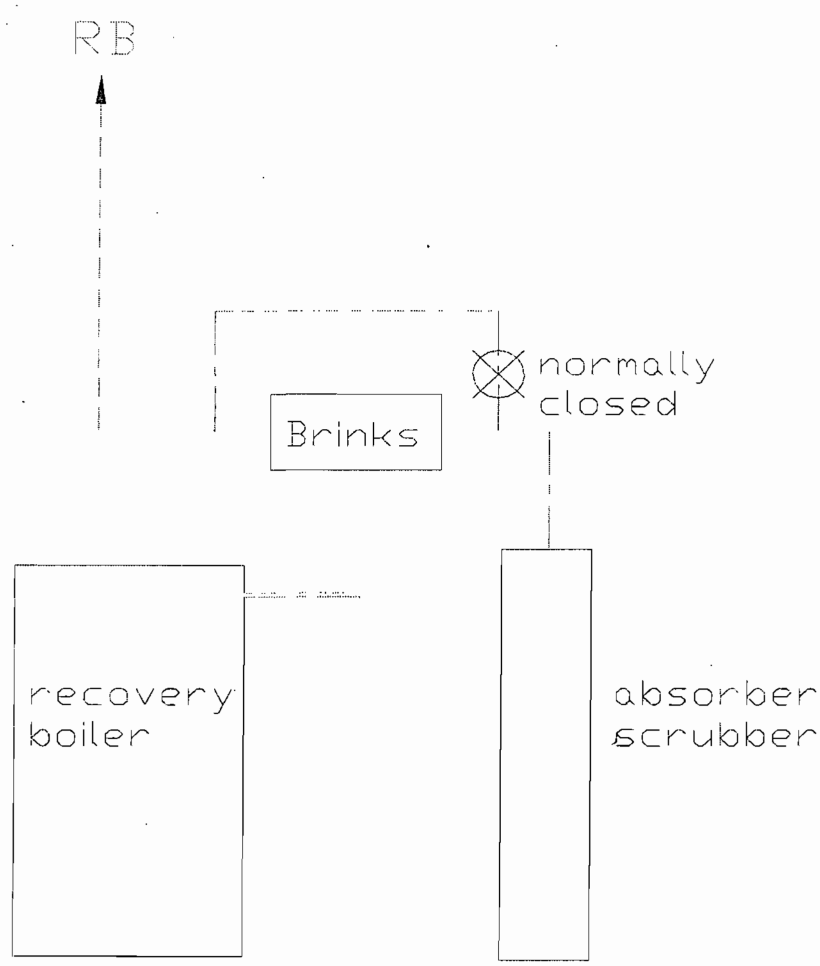
ATTACHMENT 19
CAM PLAN

Supplied as a separate document with the application, marked as Attachment 19.

ATTACHMENT 20
MS – PROCESS FLOW DIAGRAM



ATTACHMENT 21
RB – PROCESS FLOW DIAGRAM



Emission Unit Flow Diagram

Equipment & pulp flow

Enclosures W/vents

Enclosed gas flow

Emission points

ATTACHMENT 22
RB – DESCRIPTION OF CONTROL EQUIPMENT

RECOVERY BOILER STACK:

Emissions from the recovery boiler are controlled through a multi-stage wet scrubber and a four compartment filter unit. The first stage of scrubbing is through a small quench tower where the flue gas temperature is reduce from about 450 to 160 degrees F utilizing 80 degree water. The water from the quench stage is discharged at the bottom of the 24 ft. diameter scrubber. The first stage in the scrubber is the heat recovery section where more heat is removed from the flue gas and used to evaporate mill liquor. This section circulates about 6000 gpm of water which increases in temperature from 115 to 155 degrees. The gas temperature drops to about 135 degrees F leaving this section. The cooling section follows. This stage uses about 3500 gpm of circulation water which is indirectly cooled through a heat exchanger which receives its cooling water from a cooling tower. The gas leaving this section is about 110 degrees F. The final stage of scrubbing is a two section absorber utilizing ammonium bisulfite as the scrubbing medium. The four trays in each section have valve caps for controlled flue gas passage through the absorption liquid. Both absorption sections have heat exchangers for cooling their circulation flows of about 1000 gpm. Normally about 175 gpm of softened water is added to the upper absorption section and 18 % aqua ammonia is added to the upper circulation stream under pH control. A constant ammonia flow of about 25 gpm is added to the lower section. The upper absorber normally operates at 5.8 pH and the lower absorber at 5.2 pH. The upper absorber pH target and the lower absorber ammonia addition can be adjusted to assure that the sulfur dioxide emissions meet the permit standards. The sulfur dioxide concentration in the stack is measured continuously with a CEM.

Fly ash particulate is removed in the quench tower and the scrubber heat removal sections. However, the ammonium bisulfite absorption produces a very fine particulate which is removed using mist filters [Brinks candles]. The filter is composed of four compartments containing 52 candles each. Each candle is 24" diameter, 12' high cylinder with gas entering from the bottom inside of the cylinder. The gas then passes through 2" of wound fiber which filters the particulate. The top of the cylinder is sealed. Each compartment is rinsed for about 2 hours with water and evaporator condensate on an eight hour schedule. The pressure drop across the mist filter system normally ranges from 5 to 15 inches of water pressure. The recovery boiler routinely meets the permitted particulate and sulfur dioxide emissions standards utilizing these scrubbing and filtering systems.

ATTACHMENT 23
RB – DESCRIPTION OF STACK SAMPLING FACILITIES

RECOVERY BOILER STACK:

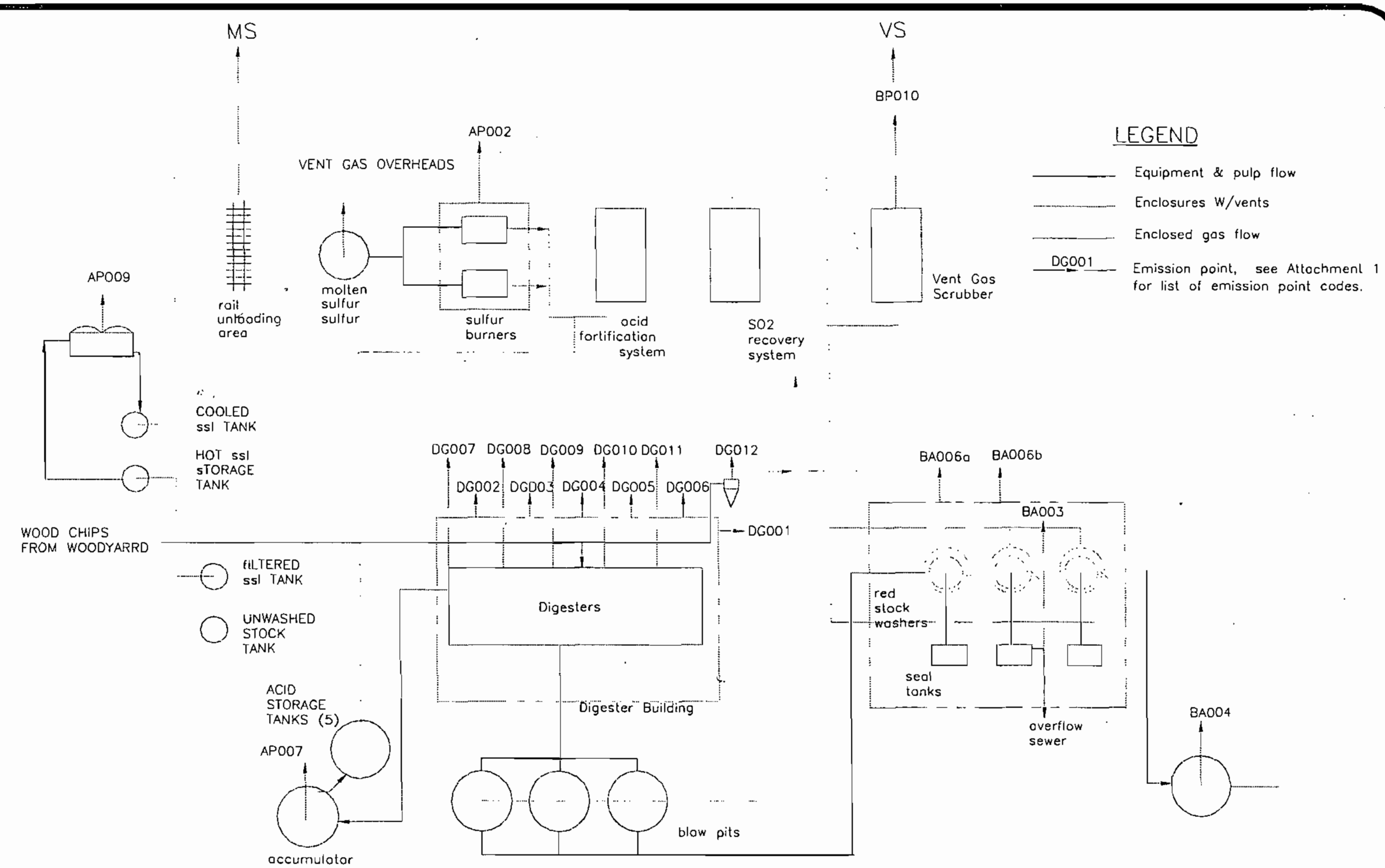
There are two sample ports oriented at a 90 degree angle, 5.5 diameters from the stack discharge and 7.7 diameters from any upstream changes in stack dimensions. A railed sampling platform is provided along with a sampling equipment monorail for each port. Ladders with safety guards are provided to access the sampling platforms.

ATTACHMENT 24
RB – IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS

The following are non-rule applicable requirements that apply to this emissions unit from Air Operating Permit 098004-003-AO Specific Conditions:

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1	.	
Specific Condition 2		Compliance will be demonstrated with the PM limit by annual method 5 stack tests. and with the SO2 limit by continuous emission monitor. When equivalent surrogate methods are developed (see CAM Plan - Attachment 19) suitable for constant emission monitoring such surrogate methods will be used.
Specific Condition 3		
Specific Condition 4		
Specific Condition 5		
Specific Condition 6		
Specific Condition 7		
Specific Condition 8	Remove condition 8C. Maintenance reports on individual equipment are unnecessary to determine if Brinks is operating.	
Specific Condition 9		
Specific Condition 10		

FS–NOR/CADD: K:\CADD\JAX\72780\002.097\003.dwg
Scale: 1 = 1.00 DimScale: 1 = 2.00 Date: 7/ 3/97 Time: 10:18 AM Operator: JBRUCE



emcon

DATE 7/01/97
DWN JWB
APP MR
REV

PROJECT NO.
72780.002.097

ATTACHMENT 23

VS EMISSION UNIT
PROCESS FLOW DIAGRAM

ATTACHMENT 25
VS – PROCESS FLOW DIAGRAM

ATTACHMENT 26
VS –DESCRIPTION OF CONTROL EQUIPMENT

VENT GAS SCRUBBER STACK

Emissions from the cooking acid plant, the red stock washers, the unwashed stock tank, and the spent sulfite liquor tanks are collected and scrubbed in the vent gas scrubber. The vent gas scrubber consists of a packed tower containing 6 feet of poured packing. Gas flows upward through the packing. Absorbate is sprayed onto the top of the packing and continues a tortuous path downward through the packing to the bottom of the tower. Sodium bisulfite/sulfite absorbate is pumped from the tower sump to the sodium bisulfite storage tank. The loop is completed when the absorbate is pumped from the storage tank back to the top tray of the vent gas scrubber.

The liquid level in the tower sump is controlled by a PID type instrument in the acid plant distributive control system (DCS). The DCS has a sequential logic program (sequence table) running in the background that manages operating problems. If tower sump pump or the sump level control valve fail, the sequence logic opens a bleed off valve to prevent the sump level from building up and flowing down the gas inlet valve causing the main fan to shut down or damaged. This allows an orderly shut down for repairs. When soda ash is used, circumstances occasionally arise that cause carbon dioxide to be evolved in the tower sump pump suction. The sequential logic introduces cool water into the pump to re-establish suction.

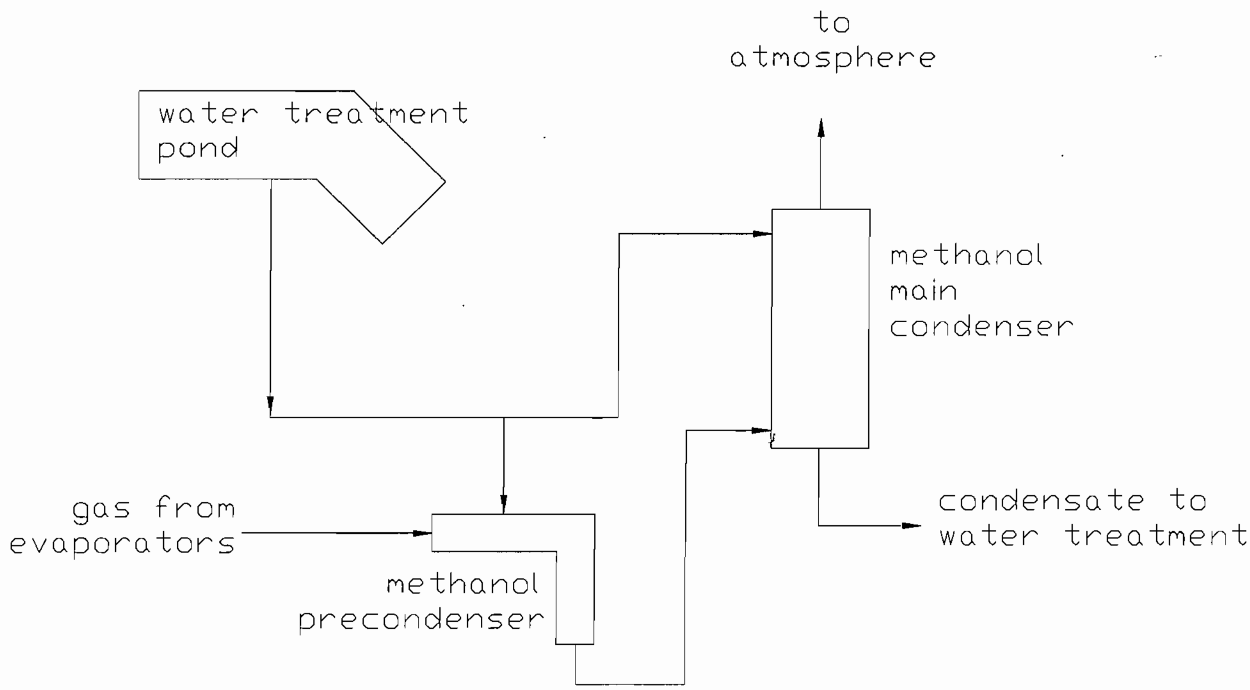
A continuous sample of absorbate from the bottom of the tower is pumped to a pH instrument. The pH signal is transmitted to the (DCS). A PID type instrument in the DCS controls the addition of fresh 7 percent caustic soda solution or 9 percent soda ash solution into the absorbate stream entering the top tray. The controller set point is pH 6.5. The pH set point may be increased to respond to an unusually high gas loading into the vent gas scrubber. The sulfur dioxide concentration in the stack is measured with a continuous emission monitor. The DCS calculates one hour and 24 hour running averages of the sulfur dioxide concentration.

ATTACHMENT 27
VS –IDENTIFICATION OF ADDITIONAL APPLICABLE REQURIEMENTS

The following are non-rule applicable requirements that apply to this emissions unit.
From state air operating permit: 0890004-005-AO

REQUIREMENT	DISPOSITION FOR FUTURE PERMIT & JUSTIFICATION	METHOD TO DEMONSTRATE COMPLIANCE
Specific Condition 1		
Specific Condition 2		Compliance is determined by continuous emission monitor for SO2 for concentration. Flow is determined by the size of the constant speed fan on this system. Data is reported quarterly per Specific Condition 7.
Specific Condition 3		
Specific Condition 4		
Specific Condition 5		Compliance is determined by the physical presence of the in stack monitor and the quarterly report of data.
Specific Condition 6		.
Specific Condition 7		Compliance is demonstrated by the submittal of the quarterly report for the CMS for this emission unit.
Specific Condition 8		
Specific Condition 9		

ATTACHMENT 28
EV – PROCESS FLOW DIAGRAM



ATTACHMENT 29
EV – DESCRIPTION OF CONTROL EQUIPMENT

The evaporator vents methanol condenser

Steam is used to eject vent gases from the evaporators in order for the optimum operating pressure to be maintained on each module. This steam with the evaporator vent gases containing methanol is piped to the methanol condenser system. Unlike the digester area gas stream which has a temperature of about 120 degrees F, the steam carrying the vent gases from the evaporators is at 220 degrees F. For this reason, a pre-condenser is provided to condense the steam and allow the main condenser to condense the methanol. The water used to condense the steam and methanol is from the biological effluent treatment system.

Based on testing and an engineering study it has been determined that methanol control is based on the gas temperature leaving the main condenser.

ATTACHMENT 30
EV – DESCRIPTION OF STACK SAMPLING FACILITIES

Air Vent Data

Emission Unit No.	Emissions Unit Name	Diameter inches	Height (feet)	Est. (ACFM)	Access and testing comments
AP010	Vent Gas Scrubber	36	110	28,000	Three inch sampling ports in scrubber. Climb several flights of stairs, and a 10 ft. ladder, then up a fifty foot ladder into a round, concrete room.
RB041	Recovery Scrubber Stack	88	264	131,000	Standard sampling ports on stack used for annual Method 5 tests. Elevator to the eighth floor, up two flights of stairs, then up a fifty foot ladder from the Recovery roof.

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

STARTUP CHECKLIST - EVAPORATOR VENT COLLECTION SYSTEM	
Date: ______	**initials**
System Startup begins when cooling water flow is established to the Methanol Condensers. System Startup Beginning Time ______	
Have the electrician meg the Cooling Water Supply Pump - 21005 per SOP.	
Check the stroke on the cooling water flow control valve - 0293, 0330, 0332 and 0333	
Check the stroke on the condenser level control valve - 0106	
Check 21005 to make sure that it is primed. Refer to Startup SOP.	
Verify that all of the manual valves are lined up to pump cooling water from the ASB to the condenser and out to the sewer. Refer to the Startup SOP.	
Verify that the emergency raw water supply valve is closed.	
Verify that all piping vents and drains are closed. Refer to the Startup SOP.	
Verify that all of the manual valves are lined up to send the evaporator NCG's to the methanol condenser. Refer to the Startup SOP.	
Verify that seals are in place on 2A NCG, 2B NCG E-3A/E-3B exhaust and A and B Hogging jet exhaust valves to the Recovery Scrubber. Seal #s ______, ______, ______, ______	
Verify that all of the manual valves are lined up to send the discharge gases from the condenser through the vent gas fan and into the scrubber. *There is a manual valve on this line just before entry into the scrubber.* Refer to the Startup SOP.	
System Startup Ends and "Normal Operations" begin when A and B Line Evaps are up to target steam pressures and 11-0103 condenser gas temperature stabilizes. Startup Ending Time ______ Total Startup Time ______	
Were the Start-up Procedures followed according to the SSM Plan? If **NO**, describe actions taken. Notify Area Manager.	Yes or No
Did the Start-up result in excess emissions beyond those described in the SSM Plan? If **YES**, describe the events and how emissions were minimized:	Yes or No
Report to be reviewed by Area Manager. **Area Manager**: ______ **Date**:	

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

SHUTDOWN CHECKLIST - EVAPORATOR VENT COLLECTION SYSTEM	
Date: ____________	**initials**
System Shutdown Begins when A and B Line Shutdown Procedures are started. Shutdown Beginning Time ____________	
A Line and B Line Evaporators have been shut down according to procedure.	
SSL Feed valves closed to the Evaporators	
A and B Line steam stops closed.	
Steam supply valves closed to A and B Line ejectors.	
After the items above have been verified proceed with Methanol Condenser Shutdown according to procedures found in Evaporators Standard Operating Procedures Manual.	
System Shutdown Ends when the Condenser Bypass valve is open and the Condenser Gas Supply valve is closed. Shutdown Ending Time ________ Total Time of Shutdown ____________	
Were the Shutdown Procedures followed according to the SSM Plan? If **NO**, describe actions taken. Notify Area Manager.	Yes or No
Did the Shutdown result in excess emissions beyond those described in the SSM Plan? If **YES**, describe the events and how emissions were minimized:	Yes or No
Report to be reviewed by Area Manager. **Area Manager:** **Date:**	

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

Name: ______________________________ Date: __________________

Checklist Procedure for Minimization of Emissions during Startup of the Digester and Washer Vent Gas Collection System

Startup procedures began at: ________________ AM / PM. Date:________________
The following conditions must be verified. The Proper Sequence for Startup is as follows:

Verification of startup conditions
The following conditions must be verified prior to filling a digester or washing pulp.
The Proper Sequence for startup is as follows:

- ☐ **1.** Followed the Proper Startup Procedure for the Vent Gas Scrubber located in the Unbleached Standard Operating Procedures Manual Chapter 3, Section 3.1 Vent Gas Scrubber Startup.

Note: The following procedures are as needed.

- ☐ **2.** Followed the Proper Startup Procedure for the Blow Gas System located in the Unbleached Standard Operating Procedures Manual Chapter 10, Section 10.1 Blow Gas System Startup.
- ☐ **3.** Notified the Red Stock Washers/ Blow Pit Operator that B-5 Fan and the Scrubber are running. Red Stock Washer/ Blow Pit Operator Confirmed B-3 Fan has been started up using the startup procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.1.
- ☐ **4.** Followed the Proper Startup Procedure for the Digester Gas Fan #11605 located in the Unbleached Standard Operating Procedures Manual Chapter 16, Section 16.2.
- ☐ **5.** Red Stock Washer/ Blow Pit Operator Confirmed B-1 Fan has been started up using the startup procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.1.

Startup procedures ended at : ________________AM / PM Date:________________
Total time of Startup Event: ________________ Minutes
The Start-up Procedures were followed according to the SSM Plan: Yes _____. No _____.
If **NO**, describe actions taken: ____

____

____

If **NO**, contact Area Manager. Date: ______________ Time: ______________ Initials: ______

Report to be reviewed by the Area Manager.

Area Manager: ________________________________ Date: ____________________

ATTACHMENT 31
EV & VS
PROCEDURES FOR STARTUP AND SHUTDOWN

Name: ______________________________ **Date:** ____________________

Checklist Procedure for Minimization of Emissions during Shutdown of the Digester and Washer Vent Gas Collection System

Shutdown procedures began at: ______________ AM / PM. Date:______________
The following conditions must be verified.. The Proper Sequence for Shutdown is as follows:

☐ **1.** Red Stock Washer/ Blow Pit Operator Confirmed B-1 Fan has been shutdown using the shutdown procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.4.

☐ **2.** Followed the Proper Shutdown Procedure for Digester Gas Fan #11605 locate in the Unbleached Standard Operating Procedures Manual Chapter 16, Section 16.2a.

☐ **3.** Red Stock Washer/ Blow Pit Operator Confirmed B-3 Fan has been shutdown using the shutdown procedures located in the Red Stock Washer/Blow Pit Manual Chapter 4, Section 4.4.

☐ **4.** Followed the Proper Shutdown Procedure for the Blow Gas System located in the Unbleached Standard Operating Procedures Manual Chapter 10, Section 10.7 Blow Gas System Shutdown.

Note: The following procedure will take place last.

☐ **5.** Followed the Proper Shutdown Procedure for the Vent Gas Scrubber located in the Unbleached Standard Operating Procedures Manual Chapter 3, Section 3.3 Vent Gas Scrubber Shutdown.

Shutdown procedures ended at : ______________AM / PM Date:______________
Total time of Shutdown Event: ______________ Minutes

The Shutdown Procedures were followed according to the SSM Plan: Yes _____. No _____.
If **NO**, describe actions taken: ____

____

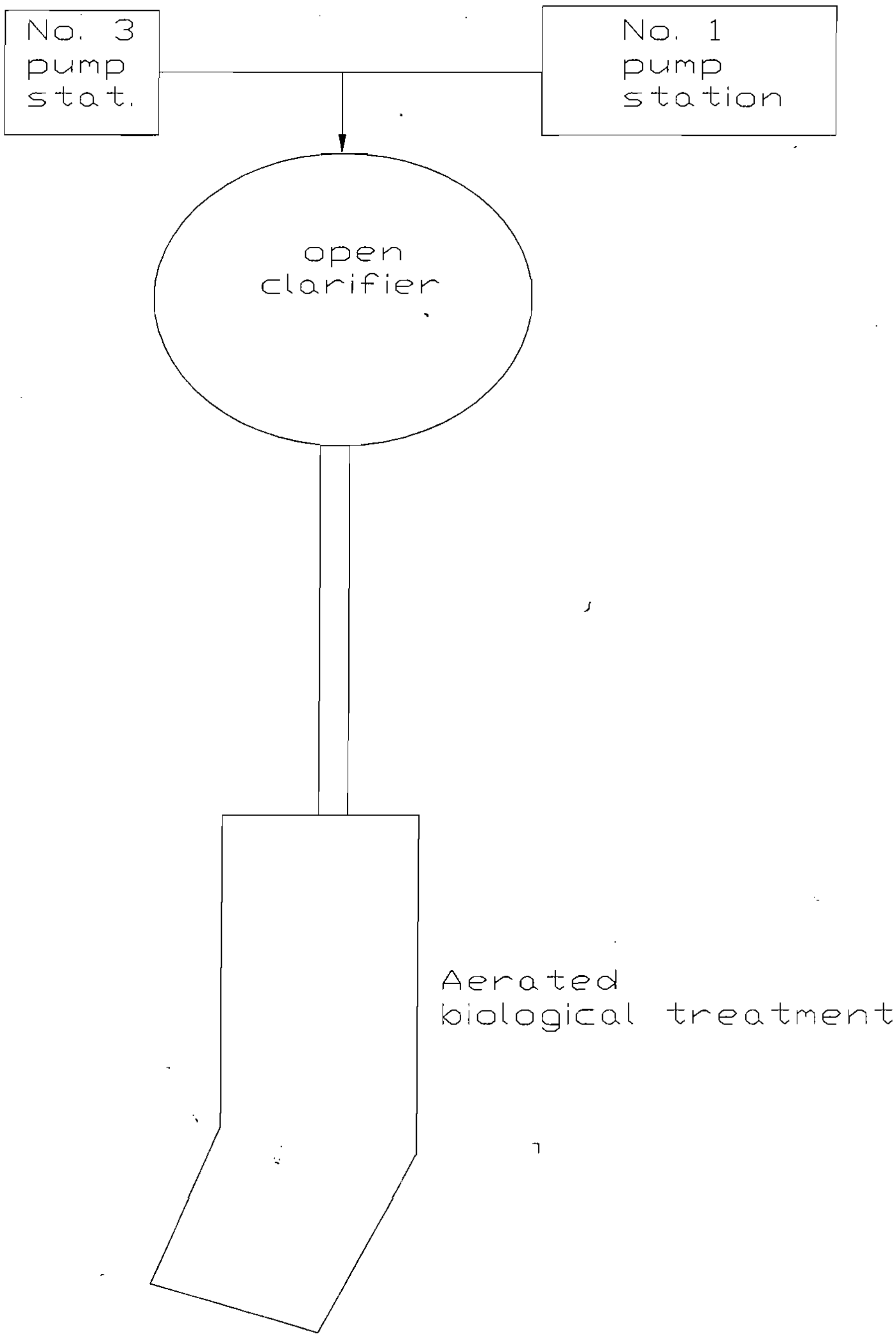
____

If **NO**, contact Area Manager. Date: ______________ Time: ______________ Initials: ______

Report to be reviewed by the Area Manager.

Area Manager: ______________________________ Date: ____________________

ATTACHMENT 32
WT – PROCESS FLOW DIAGRAM



ATTACHMENT 33
COMPLIANCE REPORT

1. Recovery Boiler (RB)

Particulate Matter. Compliance with the emission limit for recovery boiler particulate, Stipulation of March 10, 1982 and Order of April 5, 1982 and condition 4 of permit AO45-171127, is measured annually through the use of EPA Method 5. Between such annual testing, compliance with this emission limit is monitored through quantification of the amount of particulate isokinetically collected on a filter tape as measured by a beta gauge calibrated against EPA Method 5 particulate tests, on the assumption that beta gauge readings at a given operating rate will correlate to compliance tests based on EPA Method 5. Based on this assumption, and subject to the variability and inaccuracy inherent in the test methods employed, the company states that particulate emission from the recovery boiler are in compliance with the permit limit.

Sulfur Dioxide. Compliance with the sulfur dioxide emission limit as specified in condition 4 of permit AO 45-171127 and modified in permit 0890004-001-AC, and corrected as described in this application will be measured by instack continuous emission sulfur dioxide monitor and controlling the exit gas sulfur dioxide concentration to 300 ppm (dry basis) and the flue gas flow rate by a gas flow monitor. Based on the assumption that such parameters will adequately measure SO2 compliance, and subject to the variability and inaccuracy inherent in the test methods employed, the company states that sulfur dioxide emission from the recovery boiler are in compliance with the permit limit.

2. Power Boilers.

Particulate Matter. Compliance with the emission limit for power boiler particulate, Stipulation of March 10, 1982 is measured annually through the use of EPA Method 5. Between such quarterly testing, compliance with this emission limit is monitored through surrogate monitoring described in the CAM Plan. Based on this assumption, and subject to the variability and inaccuracy inherent in the test methods employed, the company states that particulate emissions from the power boiler are in compliance with FAC 62-296.410.

Sulfur Dioxide. Compliance with the emission limit for power boiler sulfur dioxide, Stipulation of March 10, 1982 as modified in this application is demonstrated through specification of the sulfur content of purchased oil on the assumption that maintaining a sulfur content below 2.5 weight percent will assure compliance. Based on this assumption, and subject to the variability and inaccuracy of the sulfur content of the purchased fuel the company states that the sulfur dioxide emissions are in compliance within the mass emission rates in the March 10, 1982 stipulation.

Opacity. The opacity standard, FAC 62-296.410(1)(b)(1) is not related to the attainment or maintenance of any ambient air quality standard an hence is not federally enforceable. Compliance with this standard is demonstrated through periodic use of EPA Method 9 readings of stack opacity. Subject to the variability and basic subjective inaccuracy inherent in such method, the company states that the mill is in compliance with this standard.

3. Vent Gas Scrubber

Sulfur Dioxide. Compliance with the emission limit for acid plant sulfur dioxide, Specific Condition 4 of permit AO45-182645, modified by permit 0890004005, is measured through an in stack sulfur dioxide monitor and limiting the flow through the scrubber to 28,350 dscfm. On the assumption that the scrubber fan for this emission unit is a constant speed fan and therefore flow is constant through the scrubber. Based on this assumption, and subject to the variability and inaccuracy inherent in fluctuating pressures across the fan, the company states that the sulfur dioxide emission from the acid plant stock is in compliance with the permitted mass emission rate.

4. General Nuisance Odor Standard

No declaration is being made regarding the compliance with the general nuisance odor standard [FAC 62-296.320(2)]due to its vague and subjective nature.

5. No. 6 Oil Storage Tank subject to 40 CFR Part 60, Subpart Kb

Rayonier is maintaining on site the required records per 40 CFR 60.116 (a) and (b).

6. Methanol emissions from sulfite pulp mills subject to 40 CFR Part 63, Subpart S

The Subpart S MACT rules at 40 CFR 63.444[1] require that existing ammonia base sulfite pulp mills take whatever action is needed to control the HAP emissions from (1) each digester system vent, (2) each evaporator system vent, and (3) each pulp washing system vent, so that these vents do not emit more than 2.2 pounds of total HAP or methanol per ton of Oven Dry Pulp (defined as unbleached pulp at zero percent moisture content by weight).

Hazardous air pollutant emission points for the Fernandina Mill include (1) the combined digester and washer systems vent from which the methanol is removed by the existing vent gas scrubber and a new direct contact condenser, (2) the vents from two sets of multiple effect evaporators are combined into one stream in which the methanol is removed by a new direct contact condenser, and (3) the wastewater collection and treatment systems to which the scrubbing media from the new condensers is sent.

The system for sulfur dioxide emissions is used to capture gas streams containing methanol from the digester and red stock washer area. The scrubbing tower has a 6-foot section of pall ring packing for condensing methanol. If the gas is cooled below 150 degrees F and contacted with water, the methanol will condense, dissolve in the water, and be removed from the gas stream. The tower uses 150 - 250 gpm of well water at approximately 80 degrees F to remove the methanol. The control indicator for this system can be differential gas temperature across the tower or the leaving gas temperature. These values are continuously provided to the operator on the distributed control system screen.

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[1]MACT 40 CFR 63.444 and BAT 40 CFR 430 make up the CLUSTER Rule (63 Federal Register 18504) that was promulgated to cover the Pulp and Paper Industry on April 15, 1998.

ATTACHMENT 33
COMPLIANCE REPORT

Steam is used to eject vent gases from the multiple effect pulping liquor evaporators in order for the optimum operating pressure to be maintained on each module. This steam with evaporator vent gases containing methanol is piped to the evaporator methanol condenser system. Unlike the digester area gases which have a temperature around 120 degrees F, the steam carrying the vent gases from the evaporators is at 220 degrees F. For this reason, a pre-condenser is provided to condense the steam and allow the main condenser to condense the methanol. The water used to condense the steam and methanol is from the biological effluent treatment system.

The control indicator for this system is the gas temperature leaving the main condenser. This ensures the gas temperature is below the condensation point for methanol.

The effluent from the covered systems combines with other effluent from the mill, some of which contains methanol, and is treated in the biological treatment system (aerated stabilization basin). The biological treatment removes the methanol from the effluent via bacterial digestion. The quantity of methanol emitted is estimated using the EPA Method 9 model. The treatment system must operate effectively for the mill to meet its biochemical oxygen demand and total suspended solids permit limitations. This system is quite robust and there would need to be a significant and prolonged decrease in efficiency for the methanol not to be consumed. The microorganism rating and the amount of aeration horsepower being applied monitor the operation of the biological system. Both of these parameters are measured at least daily. The horsepower applied over a twenty-four hour period is the control indicator for this system.