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**DEPT. OF ENV. PROTECTION
NORTHEAST DISTRICT - JAX**

REPORT ON

**AIR CONSTRUCTION
PERMIT APPLICATION FOR
COMPLIANCE WITH MACT I STANDARDS
GEORGIA-PACIFIC CORPORATION
PALATKA MILL**

Prepared For:

**Georgia-Pacific Corporation
North of CR 216, West of US 17
Palatka, Florida 32177**

Prepared By:

**Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

August 1999

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BUREAU OF AIR REGULATION

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2 Copies - Golder Associates Inc**

**Department of
Environmental Protection**

DIVISION OF AIR RESOURCES MANAGEMENT

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APPLICATION FOR AIR PERMIT - LONG FORM

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

DEPT. OF ENV. PROTECTION
NORTHEAST DISTRICT - JAX

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

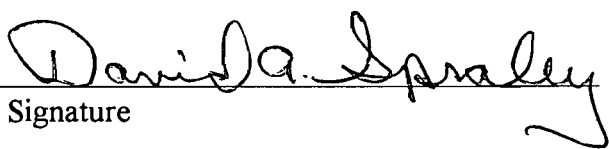
Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: Georgia-Pacific Corporation	
2. Site Name: Palatka Mill	
3. Facility Identification Number: 1070005 [] Unknown	
4. Facility Location Information: Street Address or Other Locator: North of CR 216; West of US 17 City: Palatka County: Putnam Zip Code: 32177	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Application Processing Information (DEP Use)

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: David Spraley, Vice President, Palatka Operations
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Georgia-Pacific Corporation Street Address: P.O. Box 919 City: Palatka State: FL Zip Code: 32178-0919
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (904) 325-2001 Fax: (904) 328-0014
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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.</i>  Signature _____ Date <u>8/2/99</u>

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID **Description of Emissions Unit** **Permit Type**

Unit #	Unit ID	Description of Emissions Unit	Permit Type
1R		Thermal Oxidizer and MACT I Sources	AC1D
2R	016	No. 4 Combination Boiler	AC1D

See individual Emissions Unit (EU) sections for more detailed descriptions.
Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".

Purpose of Application and Category

Check one (except as otherwise indicated):

Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain:

] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

] Initial air operation permit under Chapter 62-213, F.A.C., 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: _____

] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be renewed: _____

] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

] Air operation permit revision for a Title V source 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 to be revised: _____

Reason for revision: _____

Category II: All Air Construction Permit Applications Subject to Processing Under Rule 62-210.300(2)(b),F.A.C.

This Application for Air Permit is submitted to obtain:

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): _____

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

- Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

Category III: All Air Construction Permit Applications for All Facilities and Emissions Units.

This Application for Air Permit is submitted to obtain:

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: _____
A054 - 170265 for NO. 4 Combination Boiler

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

Current operation permit number(s): _____

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

Application Processing Fee

Check one:

Attached - Amount: \$ \$ 2,000.00

Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations: This application is being submitted in order to comply with NESHAPs for the Pulp and Paper Industry (MACT I), 40 CFR 63, Subpart S. See Attachment A for details.
2. Projected or Actual Date of Commencement of Construction : 1 Aug 1999
3. Projected Date of Completion of Construction : 15 Apr 2001

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: 32653-1500
3. Professional Engineer Telephone Numbers: Telephone: (352) 336-5600 Fax: (352) 336-6603

4. Professional Engineer's Statement:

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

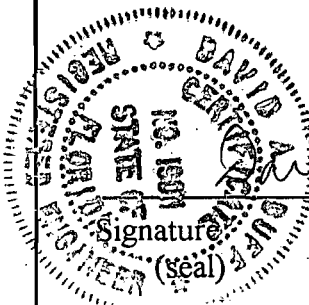
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions 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 [] 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 [X] 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

7/27/99
Date

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact: Myra Carpenter, Superintendent of Env. Affairs
2. Application Contact Mailing Address: Organization/Firm: Georgia-Pacific Corporation Street Address: P.O. Box 919 City: Palatka State: FL Zip Code: 32178-0919
3. Application Contact Telephone Numbers: Telephone: (904) 325-2001 Fax: (904) 328-0014

Application Comment

See Attachment A

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 434.0 North (km): 3283.4			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 29 / 41 / 0 Longitude: (DD/MM/SS): 81 / 40 / 45			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 26	6. Facility SIC(s): 2611, 2621
7. Facility Comment (limit to 500 characters): 			

Facility Contact

1. Name and Title of Facility Contact: Myra Carpenter, Superintendent of Env. Affairs
2. Facility Contact Mailing Address: Organization/Firm: Georgia-Pacific Corporation Street Address: P.O. Box 919 City: Palatka State: FL Zip Code: 32178-0919
3. Facility Contact Telephone Numbers: Telephone: (904) 325-2001 Fax: (904) 328-0014

Facility Regulatory Classifications

1. Small Business Stationary Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
2. Title V Source? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. Synthetic Non-Title V Source? <input type="checkbox"/> Yes, <input checked="" type="checkbox"/> No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Synthetic Minor Source of Pollutants Other than HAPs? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. Major Source of Hazardous Air Pollutants (HAPs)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7. Synthetic Minor Source of HAPs? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8. One or More Emissions Units Subject to NSPS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9. One or More Emissions Units Subject to NESHAP? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10. Title V Source by EPA Designation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11. Facility Regulatory Classifications Comment (limit to 200 characters):

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-270.700(1) - Excess Emission
62-270.700(4) - Excess Emission
62-270.700(5) - Excess Emission
62-270.700(6) - Excess Emission
62-296.320(4) - General VE Limit
62-296.404(2)(b) - Wet Scrubber exception to VE limit
See Attachment GP-FI-B, Title V Core List, Effective 3/25/97

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
PM Particulate Matter - Total	A
PM10 Particulate Matter - PM10	A
SO2 Sulfur Dioxide	A
NOx Nitrogen Oxides	A
CO Carbon Monoxide	A
VOC Volatile Organic Compounds	A
SAM Sulfuric Acid Mist	A
TRS Total Reduced Sulfur	A
HAPS Total Hazardous Air Pollutants	A
H001 Acetaldehyde	A
H021 Beryllium Compounds	B
H043 Chloroform	A
H095 Formaldehyde	A
H106 Hydrochloric acid	A
H115 Methanol	A

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

Facility Pollutant Detail Information:

1. Pollutant Emitted:		
2. Requested Emissions Cap:	(lb/hr)	(tons/yr)
3. Basis for Emissions Cap Code:		
4. Facility Pollutant Comment (limit to 400 characters):		

E. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location: <input checked="" type="checkbox"/> Attached, Document ID: <u>GP-FI-E1</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Facility Plot Plan: <input checked="" type="checkbox"/> Attached, Document ID: <u>GP-FI-E2</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Process Flow Diagram(s): <input checked="" type="checkbox"/> Attached, Document ID(s): <u>GP-FI-E3</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Fugitive Emissions Identification: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
6. Supplemental Information for Construction Permit Application: <input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u> <input type="checkbox"/> Not Applicable

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input type="checkbox"/> Not Applicable
9. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

<p>11. Identification of Additional Applicable Requirements:</p> <p><input type="checkbox"/> Attached, Document ID: _____</p> <p><input type="checkbox"/> Not Applicable</p>
<p>12. Compliance Assurance Monitoring Plan:</p> <p><input type="checkbox"/> Attached, Document ID: _____</p> <p><input type="checkbox"/> Not Applicable</p>
<p>13. Risk Management Plan Verification:</p> <p><input type="checkbox"/> Plan Submitted to Implementing Agency - Verification Attached Document ID: _____</p> <p><input type="checkbox"/> Plan to be Submitted to Implementing Agency by Required Date</p> <p><input type="checkbox"/> Not Applicable</p>
<p>14. Compliance Report and Plan</p> <p><input type="checkbox"/> Attached, Document ID: _____</p> <p><input type="checkbox"/> Not Applicable</p>
<p>15. Compliance Statement (Hard-copy Required)</p> <p><input type="checkbox"/> Attached, Document ID: _____</p> <p><input type="checkbox"/> Not Applicable</p>

ATTACHMENT GP-FI-B
FACILITY REGULATIONS

Title V Core List

Effective:03/25/97

[**Note:** The Title V Core List is intended to simplify the completion of the "List of Applicable Regulations" that apply facility-wide (see Subsection II.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.

Requirements that apply to emissions units must be identified in Subsection III.B. of DEP Form No. 62-210.900(1), Application for Air Permit - Long Form.

Applicants must identify all "applicable requirements" in order to claim the "permit shield" described at Rule 62-213.460, F.A.C.]

Federal: (description)

- 40 CFR 61: National Emission Standards for Hazardous Air Pollutants (NESHAP)
- 40 CFR 61, Subpart M: NESHAP for Asbestos.
- 40 CFR 64; Compliance Assurance Monitoring
- 40 CFR 82: Protection of Stratospheric Ozone.
- 40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).
- 40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: (description)

CHAPTER 62-4, F.A.C.: PERMITS, effective 10-16-95

- 62-4.030, F.A.C.: General Prohibition.
- 62-4.040, F.A.C.: Exemptions.
- 62-4.050, F.A.C.: Procedure to Obtain Permits; Application
- 62-4.060, F.A.C.: Consultation.
- 62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.
- 62-4.080, F.A.C.: Modification of Permit Conditions.
- 62-4.090, F.A.C.: Renewals.
- 62-4.100, F.A.C.: Suspension and Revocation.
- 62-4.110, F.A.C.: Financial Responsibility.
- 62-4.120, F.A.C.: Transfer of Permits.
- 62-4.130, F.A.C.: Plant Operation - Problems.
- 62-4.150, F.A.C.: Review
- 62-4.160, F.A.C.: Permit Conditions.
- 62-4.210, F.A.C.: Construction Permits.
- 62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-103, F.A.C.: RULES OF ADMINISTRATIVE PROCEDURE, effective 12-31-95

- 62-103.150, F.A.C.: Public Notice of Application and Proposed Agency Action.
- 62-103.155, F.A.C.: Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS,

Title V Core List

Effective:03/25/97

effective 03-21-96

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(3)(a), F.A.C.: Full Exemptions.

62-210.300(3)(b), F.A.C.: Temporary Exemption.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.350, F.A.C.: Public Notice and Comment.

62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to
Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.

62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.

62-210.650, F.A.C.: Circumvention.

62-210.900, F.A.C.: Forms and Instructions.

62-210.900(1) Application for Air Permit - Long Form, Form and Instructions.

62-210.900(5) Annual Operating Report for Air Pollutant Emitting Facility, Form and
Instructions.

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 03-20-96

62-213.205, F.A.C.: Annual Emissions Fee.

62-213.400, F.A.C.: Permits and Permit Revisions Required.

62-213.410, F.A.C.: Changes Without Permit Revision.

62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.

62-213.420, F.A.C.: Permit Applications.

62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.

62-213.440, F.A.C.: Permit Content.

62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.

62-213.900(1) Major Air Pollution Source Annual Emissions Fee Form, Form and
Instructions.

CHAPTER 62-256, F.A.C.: OPEN BURNING AND FROST PROTECTION FIRES, effective

Title V Core List

Effective:03/25/97

11-30-94

CHAPTER 62-257, F.A.C: ASBESTOS NOTIFICATION AND FEE, effective 03/24/96

CHAPTER 62-281, F.A.C: MOTOR VEHICLE AIR CONDITIONING REFRIGERANT RECOVERY AND RECYCLING, effective 03-07-96

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-13-96

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

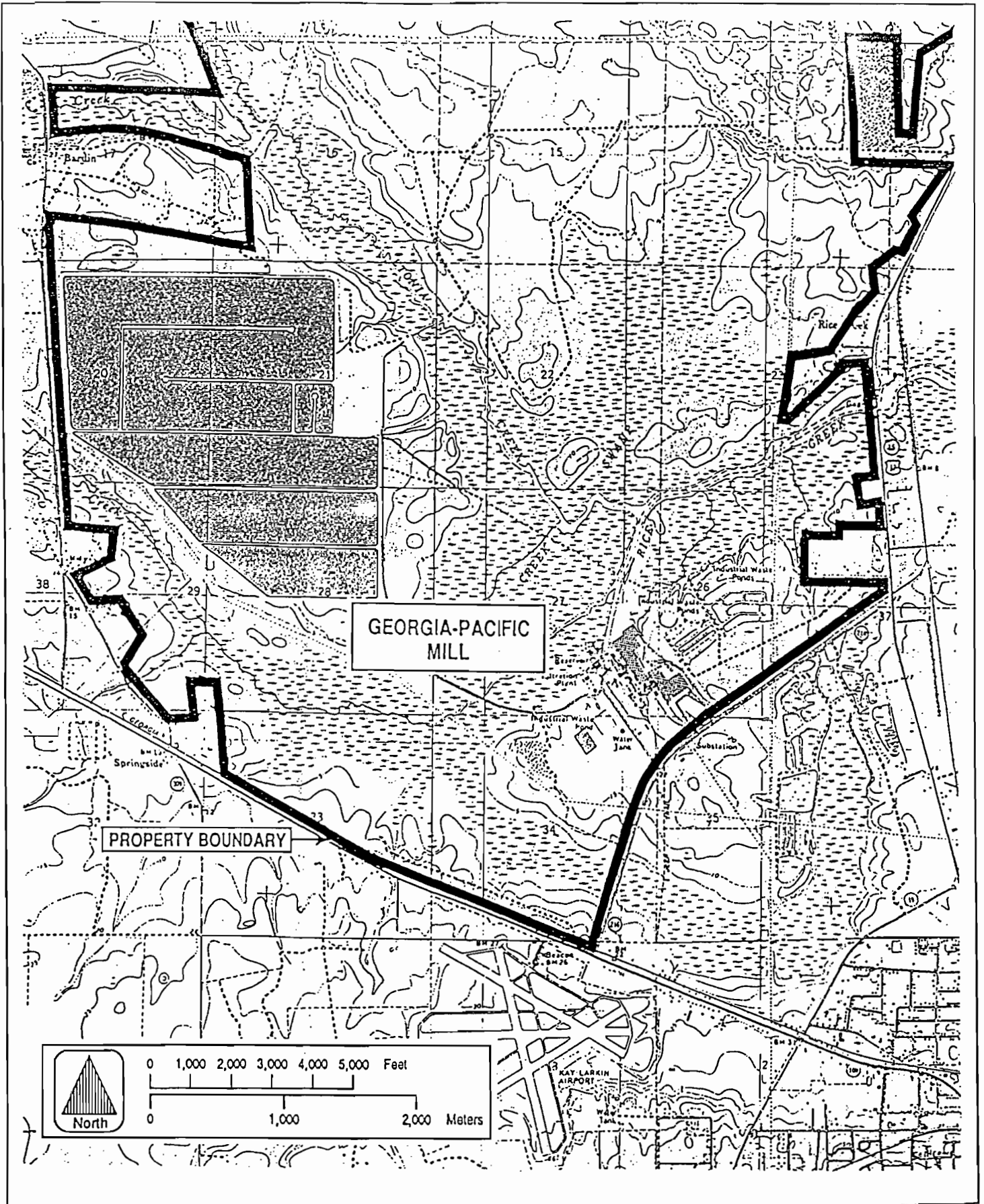
62-296.320(3), F.A.C.: Industrial, Commercial, and Municipal Open Burning Prohibited

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

n:\t5permit\canned\core.lst

ATTACHMENT GP-FI-E1

AREA MAP



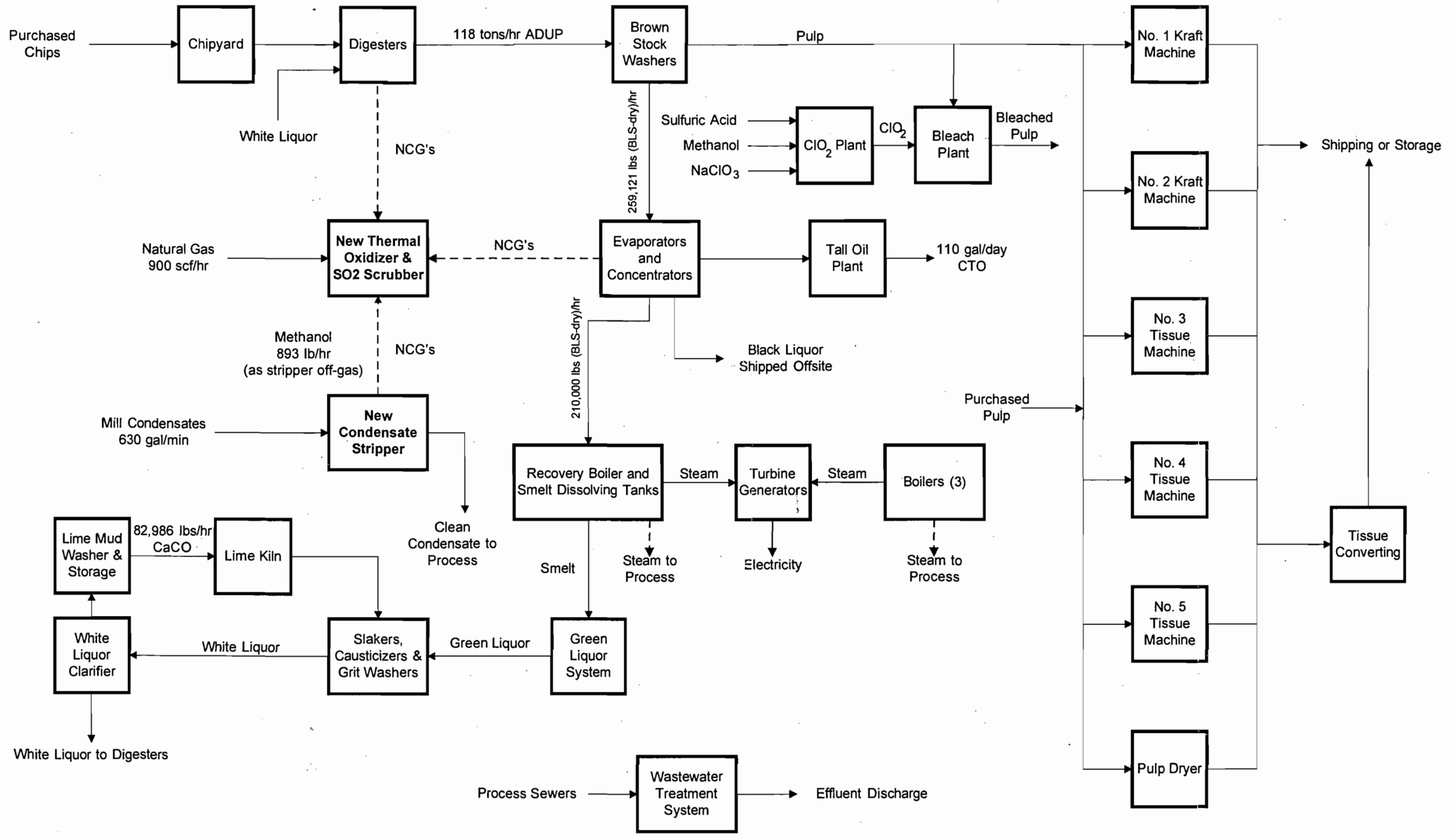
Attachment GP-FI-E1
 Area Map: Georgia-Pacific Corporation
 Palatka Mill



ATTACHMENT GP-FI-E2

FACILITY PLOT PLAN

ATTACHMENT GP-FI-E3
PROCESS FLOW DIAGRAM



Notes: ADUP = Air Dried Unbleached Pulp
 CTO = Crude Tall Oil
 ———> Liquid / Solid
 - - - -> Gaseous

REV	By/Date	Revision:	APP

Date: May 21, 1999
 Scale:
 Drawn By: M. Arrants
 Checked:
 Approved:

Division: PALATKA OPERATIONS
 Title: Facility Process Flow Diagram for MACT I Compliance
 File Name: GPFIE3.VSD

Georgia-Pacific
 DRAWING NO. GP-FI-E3

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

**A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)****Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

] 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.

2. Single Process, Group of Processes, or Fugitive Only? 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.

] 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.

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Thermal Oxidizer and MACT I Sources		
2. Emissions Unit Identification Number: <input checked="" type="checkbox"/> No Corresponding ID <input type="checkbox"/> Unknown		
3. Emissions Unit Status Code: A	4. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Emissions Unit Major Group SIC Code: 26
6. Emissions Unit Comment (limit to 500 characters): See Attachment GP-E01-B6		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters):

Gas Scrubber

2. Control Device or Method Code: **13**

B.

1. Description (limit to 200 characters):

Thermal Oxidizer

2. Control Device or Method Code: **21**

C.

1. Description (limit to 200 characters):

Process Enclosed

2. Control Device or Method Code: **54**

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Details

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer:	Model Number:	
4. Generator Nameplate Rating:	MW	
5. Incinerator Information:		
	Dwell Temperature:	1,600 °F
	Dwell Time:	0.75 seconds
	Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	20	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:	118	TPH ADUP
5. Operating Capacity Comment (limit to 200 characters): See Attachment GP-E01-C5. ADUP = air-dried unbleached pulp.		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/yr	8,760 hours/yr

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

40CFR60.11(a) Compliance with standards and maintenance requirements.
40CFR60.11(d) Compliance with standards and maintenance requirements.
40CFR60.11(f) Compliance with standards and maintenance requirements.
40CFR60.12 Circumvention.
40CFR60.13(a) Monitoring requirements.
40CFR60.13(b) Monitoring requirements.
40CFR60.13(f) Monitoring requirements.
40CFR60.19
40CFR60.283(a)(1)(iii) Standard for Total Reduced Sulfur
40CFR60.283(a)(1)(iii) Standard for total reduced sulfur (TRS).
40CFR60.284(b)(1) Monitoring of Emissions and Operations
40CFR60.284(d)(3)(ii) Monitoring of emissions and operations.
40CFR60.7 Notification and record keeping.
40CFR60.8 Performance tests.
40CFR63.443(a)(1)(i) MACT Standards - LVHC system
40CFR63.443(c) MACT Standards - Closed Vent Systems
40CFR63.443(d)(3) MACT Standards - HAP Reduction in a Thermal Oxidizer
40CFR63.443(e) MACT Standards - Excess Emissions
40CFR63.446(b) MACT Standards - Pulping Process Condensates
40CFR63.446(c) MACT Standards - Pulping Process Condensates
40CFR63.446(d) MACT Standards - Pulping Process Condensates
40CFR63.446(e)(5) MACT Standards - Pulping Process Condensates
40CFR63.446(h) MACT Standards - Pulping Process Condensates
40CFR63.450 MACT Standards - Closed Vent Systems
40CFR63.453(b) MACT Standards - Monitoring for Thermal Oxidizers
40CFR63.453(g) Monitoring - Steam Stripper
40CFR63.453(i) MACT Standards - Monitoring Condensates
40CFR63.453(k) MACT Standards - Monitoring-Closed Vent Systems
40CFR63.453(l) MACT Standards - Monitoring-Condensate Closed Collection
40CFR63.453(m) MACT Standards - CMS for Alternatives
40CFR63.453(n) MACT Standards - Monitoring-Parameter Monitoring
40CFR63.453(o) MACT Standards - Operating Parameter Ranges
40CFR63.454 MACT Standards - Recordkeeping
40CFR63.455 MACT Standards - Reporting
40CFR63.457 - Test Methods and Procedures
40CFR63.962 MACT Standards - Subpart RR - Individual Drains
40CFR63.964 MACT Standards - Subpart RR - Individual Drains
62-204.800(7)(b)33.
62-296.401(1) Incinerators
62-296.404(3)(a)1. Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(3)(a)3. Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(3)(f) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(4)(e) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(4)(f) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(5)(c) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(6)(a) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(6)(b) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(6)(c)3. Kraft (Sulfate) Pulp Mills and Tall Oil Plants

(Continued on Next Page)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-296.404(6)(c)4. Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-296.404(6)(d) Kraft (Sulfate) Pulp Mills and Tall Oil Plants
62-297.401(1)(a) EPA Method 1 – Sample and Velocity Traverses for Stationary sources – 40 CFR
62-297.401(16) EPA Method 16 – Semicontinuous Determination of Sulfur Emissions from Stationary
62-297.401(16)(a) EPA Method 16A – Determination of Total Reduced Sulfur Emissions from Station
62-297.401(2) EPA Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate – 40
62-297.401(3) EPA Method 3 – Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, And Dry Molec
62-297.401(4) EPA Method 4 – Determination of Moisture Content in Stack Gases – 40 CFR 60 Appe
62-297.401(5) EPA Method 5 – Determination of Particulate Emissions from Stationary Sources –
62-297.401(6)(c) EPA Method 6C – Determination of Sulfur Dioxide Emissions from Stationary Sour
62-297.401(8) EPA Method 8 – Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions f
62-297.401(9)(a) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary
62-297.440(1) Fuel Analysis

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: New Thermal Oxidizer	
2. Emission Point Type Code: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: See Comment	
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W	
6. Stack Height:	100 feet
7. Exit Diameter:	3.6 feet
8. Exit Temperature:	130 °F

9. Actual Volumetric Flow Rate:	42,000 acfm
10. Percent Water Vapor:	7 %
11. Maximum Dry Standard Flow Rate:	22,000 dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates:	
Zone:	East (km): North (km):
14. Emission Point Comment (limit to 200 characters):	
	Batch Digester System, Nos. 1-4 MEE System, Turpentine System, and Condensate Stripper System all vent to new Thermal Oxidizer and Scrubber System.

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 5

<p>1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):</p> <p>Pulp and Paper and Wood Products, Sulfate (Kraft) Pulping, Digester Relief and Blow Tank: General</p>	
<p>2. Source Classification Code (SCC):</p> <p style="text-align: center;">3-07-001-01</p>	
<p>3. SCC Units:</p> <p style="text-align: center;">Tons Air-Dried Unbleached Pulp Produced</p>	
<p>4. Maximum Hourly Rate:</p> <p style="text-align: center;">118</p>	<p>5. Maximum Annual Rate:</p> <p style="text-align: center;">675,250</p>
<p>6. Estimated Annual Activity Factor:</p>	
<p>7. Maximum Percent Sulfur:</p>	<p>8. Maximum Percent Ash:</p>
<p>9. Million Btu per SCC Unit:</p>	
<p>10. Segment Comment (limit to 200 characters):</p> <p style="text-align: center;">Maximum annual rate is based on maximum daily rate of 1,850 tons (ADUP)/day (monthly average).</p>	

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Pulp and Paper and Wood Products, Sulfate (Kraft) Pulping, Multiple Effect Evaporator: General	
2. Source Classification Code (SCC): 3-07-001-03	
3. SCC Units: Tons Air-Dried Unbleached Pulp Produced	
4. Maximum Hourly Rate: 118	5. Maximum Annual Rate: 675,250
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): Maximum annual rate is based on maximum daily rate of 1,850 tons (ADUP)/day (monthly average).	

**F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)**

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Pulp and Paper and Wood Products, Sulfate (Kraft) Pulping, Condensate stripper	
2. Source Classification Code (SCC): 3-07-001-17	
3. SCC Units: Tons Air-Dried Unbleached Pulp Produced	
4. Maximum Hourly Rate: 118	5. Maximum Annual Rate: 675,250
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): Maximum annual rate is based on maximum daily rate of 1,850 tons (ADUP)/day (monthly average).	

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): Pulp and Paper and Wood Products, Fuel fired equipment, Incinerators: Natural Gas	
2. Source Classification Code (SCC): 3-07-900-13	
3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 0.02	5. Maximum Annual Rate: 8
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: 0.1	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 1,000	
10. Segment Comment (limit to 200 characters): Maximum hourly rate based on natural gas usage during thermal oxidizer startup. Maximum annual rate based on 900 scf/hr natural gas during normal operations(7.88 MMscf/yr rounded to 8).	

Segment Description and Rate: Segment of

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (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 Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):	

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM			NS
PM10			NS
SO2	013		NS
NOx			NS
SAM	013		NS
TRS	021	054	EL
CO			NS
VOC	021	054	NS
HAPS	021	054	NS
H115	021	054	NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: PM		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	5.5 lb/hour	24.1 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr		
6. Emission Factor:		5.5 lb/hr
Reference: Existing Incinerator		
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters): Emission rate based on stack test results of existing TRS incinerator.		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Emissions Unit Information Section 1 of 2
Allowable Emissions (Pollutant identified on front page)

A.

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

B.

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

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: PM10		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	5.5 lb/hour	24.1 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions:		
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr		
6. Emission Factor:		100 % of PM
Reference: Existing Incinerator		
7. Emissions Method Code:		
<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters):		
Emission rate based on stack test results of existing TRS incinerator.		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Emissions Unit Information Section 1 of 2

Allowable Emissions (Pollutant identified on front page)

A.

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

B.

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

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Pollutant Detail Information:

1. Pollutant Emitted: SO2		
2. Total Percent Efficiency of Control:		95 %
3. Potential Emissions:		54 lb/hour 236.5 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr		
6. Emission Factor:		0.7 lb/ton ADUP Reference: Eng. Estimate
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters): A 540 lb/hr uncontrolled emission rate is based on estimates from NCG Collection System vendor. 540 lb/hr TRS (as Sulfur) x 2 lb SO2/lb S x (1 - 0.95) = 54.0 lb/hr		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Emissions based on uncontrolled TRS gas and at 95% removal in SO2 scrubber.		

Emissions Unit Information Section 1 of 2
Allowable Emissions (Pollutant identified on front page)

A.

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

B.

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

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**Pollutant Detail Information:**

1. Pollutant Emitted: NOx	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	30.74 lb/hour 88.1 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr	
6. Emission Factor: 0.29 lb/ODTP Reference: NCASI	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters): Hourly: 118 TPH ADUP x 0.9 = 106 TPH ODTP. 106 TPH ODTP x 0.29 lb/ODTP = 30.74 lb/hr. Annual: 607,725 TPY ODTP x 0.29 lb/ODTP x ton/2000 lb = 88.1 TPY.	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	

A.

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

B.

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

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)****Pollutant Detail Information:**

1. Pollutant Emitted: SAM	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	2.2 lb/hour 9.5 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr	
6. Emission Factor: See Comment Reference: See Comment	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters): 54.0 lb/hr SO₂ x 0.04 = 2.2 lb/hr	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Emission Factor: H₂SO₄ is 4% of SO₂ emissions based on actual test data from existing TRS incinerator.	

Emissions Unit Information Section 1 of 2
 Allowable Emissions (Pollutant identified on front page)

A.

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

B.

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

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)****Pollutant Detail Information:**

1. Pollutant Emitted: TRS		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	0.12 lb/hour	0.53 tons/year
4. Synthetically Limited? [] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/yr		
6. Emission Factor:		5 ppmvd @ 10% O ₂
Reference: 62-296.404(3)(f)1.		
7. Emissions Method Code: [X] 0 [] 1 [] 2 [] 3 [] 4 [] 5		
8. Calculation of Emissions (limit to 600 characters): Flow rate = 22,000 dscfm @ 18.7 %O ₂ . Correct TRS @ 18.7 %O ₂ to 10 %O ₂ : 5 ppm x $[(21-18.7)/(21-10.0)] = 1.0$ ppm. 22,000 cuft/min x 60 min/hr x 2,116.8 lbf/sqft x 1.0 cuft/10 ⁶ cuft x lb·mol °R/1,545 ft·lbf x 34 lbs (H ₂ S)/lb·mol (H ₂ S) ÷ 528 °R = 0.12 lbs (TRS as H ₂ S)/hr.		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Note: Flow rate used is an engineering estimate since this unit has yet to be constructed.		

Emissions Unit Information Section 1 of 2
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: RULE		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 5 ppmvd @10% O2		
4. Equivalent Allowable Emissions:	0.12 lb/hour	0.53 tons/year
5. Method of Compliance (limit to 60 characters): See Comment		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Rule 62-296.404(3)(f)1. Compliance is presumed if incinerator operates at a minimum of 1,200°F and has a min. retention time of 0.5 sec.		

B.

1. Basis for Allowable Emissions Code: RULE		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 1,600 °F @ 0.75 sec		
4. Equivalent Allowable Emissions:	0.12 lb/hour	0.53 tons/year
5. Method of Compliance (limit to 60 characters): TEMP CMS		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): 40 CFR 63.443(d)(3).		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**Pollutant Detail Information:**

1. Pollutant Emitted: CO		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	0.51 lb/hour	2.2 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr		
6. Emission Factor:		84 lb/MMscf
Reference: AP-42		
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters): Natural gas: 900 scf/hr x 84 lb/MMscf = 0.076 lb/hr. Methanol: 135 gal/hr x 3.2 lb/1000 gal = 0.43 lb/hr. Total = 0.51 lb/hr.		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Emissions Unit Information Section 1 of 2
Allowable Emissions (Pollutant identified on front page)

A.

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

B.

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

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**Pollutant Detail Information:**

1. Pollutant Emitted: VOC		
2. Total Percent Efficiency of Control:	%	
3. Potential Emissions:	3.2 lb/hour	9.1 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions:		
[] 1 [] 2 [] 3 _____ to _____ tons/yr		
6. Emission Factor: 0.027 lb/ADTUP		
Reference: NCASI TB701		
7. Emissions Method Code:		
[] 0 [] 1 [] 2 <input checked="" type="checkbox"/> 3 [] 4 [] 5		
8. Calculation of Emissions (limit to 600 characters):		
0.027 lb/ton ADUP x 118 TPH ADUP = 3.2 lb/hr. 0.027 lb/ton ADUP x 675,250 TPY ADUP x ton/2000 lb = 9.1 TPY.		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		
Reference is NCASI Technical Bulletin 701		

Emissions Unit Information Section 1 of 2
Allowable Emissions (Pollutant identified on front page)

A.

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

B.

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

**I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)**

Visible Emissions Limitations: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: VE05
2.	Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3.	Requested Allowable Opacity Normal Conditions: 05 % Exceptional Conditions: 20 % Maximum Period of Excess Opacity Allowed: 3 min/hour
4.	Method of Compliance: Annual test using EPA Method 9. Every 5 years, conduct VE test concurrently with PM testing
5.	Visible Emissions Comment (limit to 200 characters): 62-296.401(1)

Visible Emissions Limitations: Visible Emissions Limitation _____ of _____

1.	Visible Emissions Subtype:
2.	Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> 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):

**J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)**

Continuous Monitoring System Continuous Monitor 1 of 1

1. Parameter Code: TEMP	2. Pollutant(s):
3. CMS Requirement: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): Temperature monitor at point of incineration (40 CFR 63.453(b)).	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: <input type="checkbox"/> Rule <input type="checkbox"/> Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)**

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

-] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.
- The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.
- None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:		
	PM	<input type="checkbox"/> C	<input type="checkbox"/> E <input type="checkbox"/> Unknown
	SO ₂	<input type="checkbox"/> C	<input type="checkbox"/> E <input type="checkbox"/> Unknown
	NO ₂	<input type="checkbox"/> C	<input type="checkbox"/> E <input type="checkbox"/> Unknown
4.	Baseline Emissions:		
	PM	lb/hour	tons/year
	SO ₂	lb/hour	tons/year
	NO ₂		tons/year
5.	PSD Comment (limit to 200 characters):		

**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**

Supplemental Requirements for All Applications

1.	Process Flow Diagram	<input checked="" type="checkbox"/> Attached, Document ID: <u>GP-E01-L1</u>	<input type="checkbox"/> Waiver Requested
		<input type="checkbox"/> Not Applicable	
2.	Fuel Analysis or Specification	<input checked="" type="checkbox"/> Attached, Document ID: <u>GP-E01-L2</u>	<input type="checkbox"/> Waiver Requested
		<input type="checkbox"/> Not Applicable	
3.	Detailed Description of Control Equipment	<input checked="" type="checkbox"/> Attached, Document ID: <u>GP-E01-L3</u>	<input type="checkbox"/> Waiver Requested
		<input type="checkbox"/> Not Applicable	
4.	Description of Stack Sampling Facilities	<input type="checkbox"/> Attached, Document ID: _____	<input type="checkbox"/> Waiver Requested
		<input checked="" type="checkbox"/> Not Applicable	
5.	Compliance Test Report	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable
		<input type="checkbox"/> Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable
7.	Operation and Maintenance Plan	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable
8.	Supplemental Information for Construction Permit Application	<input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u>	<input type="checkbox"/> Not Applicable
9.	Other Information Required by Rule or Statute	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Acid Rain Permit Application (Hard Copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

ATTACHMENT GP-EO1-B6
EMISSIONS UNIT COMMENT

ATTACHMENT GP-E01-B6

The MACT I regulation requires that low volume high concentration (LVHC) non-condensable gases (NCGs) containing HAPs be collected from the batch digester system, Nos. 1-4 Multiple Effect Evaporators (MEE) systems, turpentine recovery and condensate stripper system. These gases will be vented to the new Thermal Oxidizer and SO₂ scrubber. Batch digesting system consists of 13 batch digesters, a blow heat accumulator, associated equipment, and turpentine condensing system. The MEE System consists of 4 MEEs and associated equipment (i.e. pre-evaporator, concentrator, etc.). The Turpentine Condensing System includes the turpentine condensers, the turpentine decanter, and the turpentine storage tanks. The new thermal oxidizer will be installed to handle all of the LVHC NCGs, including the new condensate steam stripper. The existing TRS Incinerator will be shut down. The new condensate steam stripper will replace the existing condensate steam stripper.

ATTACHMENT GP-EO1-C5
OPERATING CAPACITY COMMENT

ATTACHMENT GP-E01-C5

MAXIMUM PROCESS/THROUGHPUT RATE

Nos. 1-4 MEE System:

259,121 lb(BLS-dry)/hr to pre-evaporator

40,208 lb(BLS-dry)/hr to No. 1 MEE

71,482 lb(BLS-dry)/hr to No. 2 MEE

71,482 lb(BLS-dry)/hr to No. 3 MEE

75,949 lb(BLS-dry)/hr to No. 4 MEE

259,121 lb(BLS-dry)/hr to concentrator

Condensate stripper system:

950 gal/min condensate to stripper (design rate)

MAXIMUM PRODUCTION RATE - BATCH DIGESTER SYSTEM

1,850 tons/day (monthly average) air dried unbleached pulp (ADUP)

Hourly maximum = 118 TPH ADUP

MAXIMUM NATURAL GAS USAGE - THERMAL OXIDIZER

1) During Start-Up

$333 \text{ scf/min} \times 60 \text{ min/hr} = 20,000 \text{ scf/hr}$

$20,000 \text{ scf/hr} \times 1000 \text{ Btu/scf} = 20 \text{ MMBtu/hr}$

2) Normal Operation

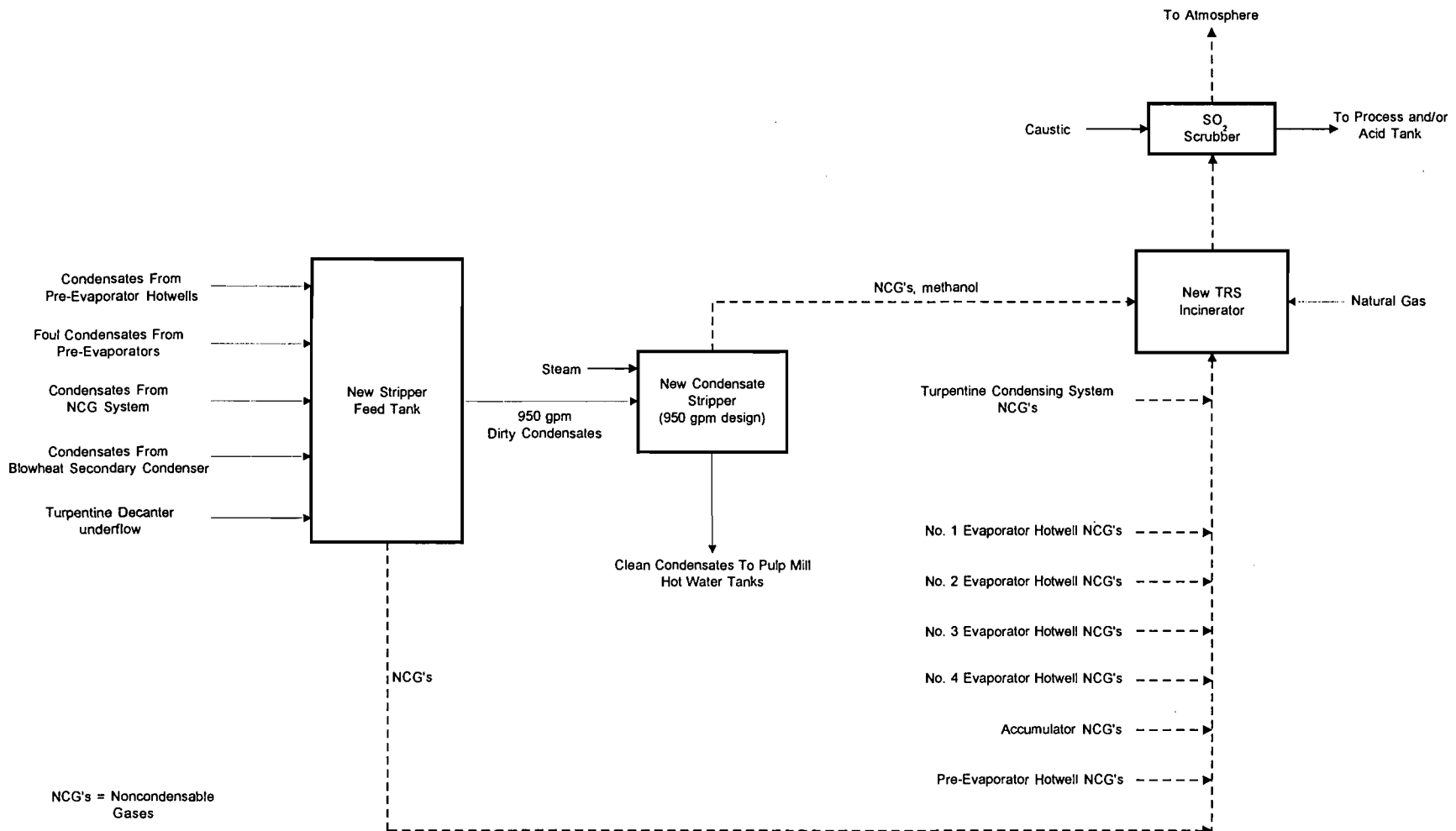
$15 \text{ scf/min} \times 60 \text{ min/hr} = 900 \text{ scf/hr}$

$900 \text{ scf/hr} \times 1000 \text{ Btu/scf} = 0.9 \text{ MMBtu/hr}$

$900 \text{ scf/hr} \times 8,760 \text{ hr/yr} = 7.88 \text{ MMscf/yr}$

These thermal oxidizer numbers are engineering estimates, as actual vendor has yet to be selected.

ATTACHMENT GP-EO1-L1
PROCESS FLOW DIAGRAM



NCG's = Noncondensable Gases

Gas Flow - - - - ->

Liquid Flow - - - - ->

REV	BY/DATE	REVISION	APP'D	DATE	DIVISION	Georgina-Pacific	REV
				11 May 99	PALATKA OPERATIONS		
					TITLE: NCG Collection System Flow Diagram for MACT I Compliance File Name: GPEO1L1.VSD		DRAWING NO. GPC-EU1-L1

ATTACHMENT GP-EO1-L2
FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT GP-E01-L2

THERMAL OXIDIZER
FUEL ANALYSIS

Fuel	Density (lb/gal)	Moisture (%)	Weight % Sulfur	Weight % Ash	Heat Capacity
Natural Gas	----	----	----	----	1,000 Btu/cf
Methanol ^a	6.6	----	----	----	65,000 Btu/gal

^a Fired as stripper off gas, not as a liquid.

ATTACHMENT GP-EO1-L3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT GP-E01-L3

CONTROL EQUIPMENT
NCG COLLECTION SYSTEM

The Non-Condensable Gases (NCG) which are collected from the various sources will be destroyed in a thermal oxidizer followed by an SO₂ scrubber. The SO₂ scrubber will remove at least 95% of the SO₂ resulting from the TRS burning.

	Thermal Oxidizer	SO ₂ Scrubber
Manufacturer	Not yet selected	Not yet selected
Inlet Gas Temp	NA	500 °F
Inlet Flow	1,500 acfm	22,000 dscfm
Pressure Drop	NA	4 inches W.C.
Scrubbing Medium	NA	Alkaline Solution
Scrubbing Medium Flow Rate	NA	113 gal/min
Operating Temp	>1600 °F	NA
Residence Time	0.75 sec	NA
Control Efficiency	99.99% for TRS	95% for SO ₂

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

**A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)****Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

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.

2. Single Process, Group of Processes, or Fugitive Only? 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.

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.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): No. 4 Combination Boiler		
2. Emissions Unit Identification Number: <input type="checkbox"/> No Corresponding ID <input type="checkbox"/> Unknown 016		
3. Emissions Unit Status Code: A	4. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Emissions Unit Major Group SIC Code: 26
6. Emissions Unit Comment (limit to 500 characters): Noncondensable Gases (NCGs) from the MACT I Sources emission unit are routed to the No. 4 Combination Boiler for TRS and HAP destruction as a backup for the proposed Thermal Oxidizer.		

Emissions Unit Control Equipment Information

A.

1. Description (limit to 200 characters): Centrifugal Collector
2. Control Device or Method Code: 7

B.

1. Description (limit to 200 characters): Electrostatic Precipitator
2. Control Device or Method Code: 10

C.

1. Description (limit to 200 characters): Thermal Oxidizer (for TRS gases, methanol, and HAPs)
2. Control Device or Method Code:

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Details

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer:	Model Number:	
4. Generator Nameplate Rating:	MW	
5. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:	513	mmBtu/hr
2. Maximum Incineration Rate:	lbs/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		
<p>Maximum heat input rate = 512.7 MMBtu/hr (rounded to 513) is based on firing wood waste/bark only or in combination with No. 6 fuel oil per permit.</p>		

Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:		
24	hours/day	7
		days/week
52	weeks/yr	8,760
		hours/yr

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Rule Applicability Analysis (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

Not Applicable

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

- 40CFR63.443(d)(4) Reduction of HAPs in Boilers
- 62-296.410(1)(b) Carbonaceous Fuel Burning Equipment.
- 62-296.410(3) Test Methods and Procedures
- 62-297.310 General Test Requirements.
- 62-297.401(1)(a) EPA Method 1 – Sample and Velocity Traverses for Stationary sources – 40 CFR 60 A
- 62-297.401(2) EPA Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate – 40 CFR
- 62-297.401(3) EPA Method 3 – Gas Analysis for Carbon Dioxide, Oxygen, Excess Air, and Dry Molecular

- 62-297.401(4) EPA Method 4 – Determination of Moisture Content in Stack Gases – 40 CFR 60 Appendix
- 62-297.401(5) EPA Method 5 – Determination of Particulate Emissions from Stationary Sources – 40 C
- 62-297.401(6) EPA Method 6 – Determination of Sulfur Dioxide Emissions from Stationary Sources – 4
- 62-297.401(9)(a) EPA Method 9 – Visual Determination of the Opacity of Emissions from Stationary So

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: EU2	
2. Emission Point Type Code: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W	
6. Stack Height:	237 feet
7. Exit Diameter:	8 feet
8. Exit Temperature:	440 °F

9. Actual Volumetric Flow Rate:	216,600	acfm
10. Percent Water Vapor:		%
11. Maximum Dry Standard Flow Rate:	101,000	dscfm
12. Nonstack Emission Point Height:		feet
13. Emission Point UTM Coordinates:		
Zone:	East (km):	North (km):
14. Emission Point Comment (limit to 200 characters):		
<p>Stack data based on actual stack testing.</p>		

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): External combustion boilers; Industrial: Wood/Bark Waste	
2. Source Classification Code (SCC): 1-02-009-02	
3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 57	5. Maximum Annual Rate: 499,028
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 9	
10. Segment Comment (limit to 200 characters): Maximum hourly rate is based on 512.7 MMBtu/hr and 4,500 Btu/lb (wood/bark waste).	

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): External combustion boilers; Industrial: Residual Oil: Grade 6 Oil	
2. Source Classification Code (SCC): 1-02-004-01	
3. SCC Units: Thousand Gallons Burned	
4. Maximum Hourly Rate: 2.8	5. Maximum Annual Rate: 24,446
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: 2.5	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: 150	
10. Segment Comment (limit to 200 characters): Max hourly rate is based on 418.6 MMBtu/hr while firing only No. 6 fuel oil and 150,000 Btu/gal (No. 6 fuel oil). Residual oil may include No. 6 fuel oil and on spec used oil.	

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	007	010	EL
PM10	007	010	NS
SO2			EL
NOX			NS
CO			NS
VOC			NS
HAPS			NS
H095			NS
H106			NS
H115			NS
TRS	021	054	EL

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**Pollutant Detail Information:**

1. Pollutant Emitted: PM		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	125.6 lb/hour	550.1 tons/year
4. Synthetically Limited? [] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/yr		
6. Emission Factor:		0.3 lb/MMBtu
Reference: Permit Limit		
7. Emissions Method Code: [X] 0 [] 1 [] 2 [] 3 [] 4 [] 5		
8. Calculation of Emissions (limit to 600 characters): Permit Limit		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

Emissions Unit Information Section 2 of 2
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: RULE
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.3 lb/MMBtu
4. Equivalent Allowable Emissions: 125.6 lb/hour 550.1 tons/year
5. Method of Compliance (limit to 60 characters): Annual stack test using EPA Method 5.
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): 62-296.410(1)(b)2; Requested Allowable Emissions: 0.3 lb/MMBtu (bark/wood waste). Max emissions cannot exceed 0.3 lb/MMBtu(Bark/Wood waste) or 125.6 lb(PM)/hr, whichever is less.

B.

1. Basis for Allowable Emissions Code: RULE
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 0.1 lb/MMBtu
4. Equivalent Allowable Emissions: 41.9 lb/hour 183.5 tons/year
5. Method of Compliance (limit to 60 characters): Annual stack test using EPA Method 5.
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Requested Allowable Emissions: 0.1 lb/MMBtu (No.6 fuel oil). 62-296.410(1)(b)2.; Equivalent allowable emissions based on 418.6 MMBtu/hr, 8,760 hrs/yr, and firing only No. 6 fuel oil.

Emissions Unit Information Section 2 of 2
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: OTHER		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	125.6 lb/hour	550.1 tons/year
5. Method of Compliance (limit to 60 characters): Annual stack test using EPA Method 5.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Permit Limit		

B.

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

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: SO2	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	2,232 lb/hour 5,514 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr	
6. Emission Factor:	2.5 %Sulfur
Reference: Permit Limit	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters): Current Permit Limit plus additional due to NCG burning: Max hourly: 1,152 lb/hr(permit) + 1,080(NCG burning) = 2,232 lb/hr. Max annual: 5,041.4 TPY(permit) + 473.0(NCG burning) = 5,514.	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): 	

Emissions Unit Information Section 2 of 2
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: OTHER		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 2.5 %Sulfur		
4. Equivalent Allowable Emissions:	1,152 lb/hour	5,041.4 tons/year
5. Method of Compliance (limit to 60 characters): Fuel analysis		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Permit limit for fuel oil firing.		

B.

1. Basis for Allowable Emissions Code: OTHER		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 1,080 lb/hr		
4. Equivalent Allowable Emissions:	1,080 lb/hour	473 tons/year
5. Method of Compliance (limit to 60 characters): Record hours of NCG burning		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Proposed limit for NCG burning in boiler		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**Pollutant Detail Information:**

1. Pollutant Emitted: TRS	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	0.54 lb/hour 0.24 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/yr	
6. Emission Factor: 99.9 % destruction Reference: Eng. Design	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters): Uncontrolled TRS in NCGs to boiler = 540 lb/hr. 540 lb/hr x (1 - 0.999) = 0.54 lb/hr. 0.54 lb/hr x 876 hr/yr x ton/2000 lb = 0.24 TPY.	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): Annual emissions based on maximum of 876 hr/yr of TRS burning in No. 4 Combination Boiler.	

Emissions Unit Information Section 2 of 2
Allowable Emissions (Pollutant identified on front page)

A.

1. Basis for Allowable Emissions Code: RULE		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 5 ppmvd @10% O2		
4. Equivalent Allowable Emissions:	0.54 lb/hour	0.24 tons/year
5. Method of Compliance (limit to 60 characters): See Comment		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): Rule 62-296.404(3)(f)1. Compliance is presumed if incinerator operates at a minimum of 1,200°F and has a min. retention time of 0.5 sec.		

B.

1. Basis for Allowable Emissions Code: RULE		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 1,600 °F @ 0.75 sec		
4. Equivalent Allowable Emissions:	0.54 lb/hour	0.24 tons/year
5. Method of Compliance (limit to 60 characters): Introduce gases into primary flame zone of boiler		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): 40 CFR 63.443(d)(3).		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitations: Visible Emissions Limitation 1 of 2

1.	Visible Emissions Subtype: VE30
2.	Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3.	Requested Allowable Opacity Normal Conditions: 30 % Exceptional Conditions: 40 % Maximum Period of Excess Opacity Allowed: 2 min/hour
4.	Method of Compliance: Annual test using EPA Method 9.
5.	Visible Emissions Comment (limit to 200 characters): 62-296.410(1)(b)1.; Opacity based on burning bark/wood waste either alone or in combination with No. 6 fuel oil.

Visible Emissions Limitations: Visible Emissions Limitation 2 of 2

1.	Visible Emissions Subtype: VE20
2.	Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3.	Requested Allowable Opacity Normal Conditions: 20 % Exceptional Conditions: 40 % Maximum Period of Excess Opacity Allowed: 2 min/hour
4.	Method of Compliance: Annual test using EPA Method 9.
5.	Visible Emissions Comment (limit to 200 characters): Based on permit limit. Applies when burning only fuel oil.

**J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)**

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [] Rule [] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: [] Rule [] Other	
4. Monitor Information: Monitor Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)**

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

-] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.
- The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.
- None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3.	Increment Consuming/Expanding Code:				
	PM	<input type="checkbox"/> C	<input checked="" type="checkbox"/> E	<input type="checkbox"/> Unknown	
	SO ₂	<input type="checkbox"/> C	<input type="checkbox"/> E	<input type="checkbox"/> Unknown	
	NO ₂	<input type="checkbox"/> C	<input type="checkbox"/> E	<input type="checkbox"/> Unknown	
4.	Baseline Emissions:				
	PM	711.8 lb/hour	2,561	tons/year	
	SO ₂	962.5 lb/hour	1,008	tons/year	
	NO ₂		313.6	tons/year	
5.	PSD Comment (limit to 200 characters):				

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

Supplemental Requirements for All Applications

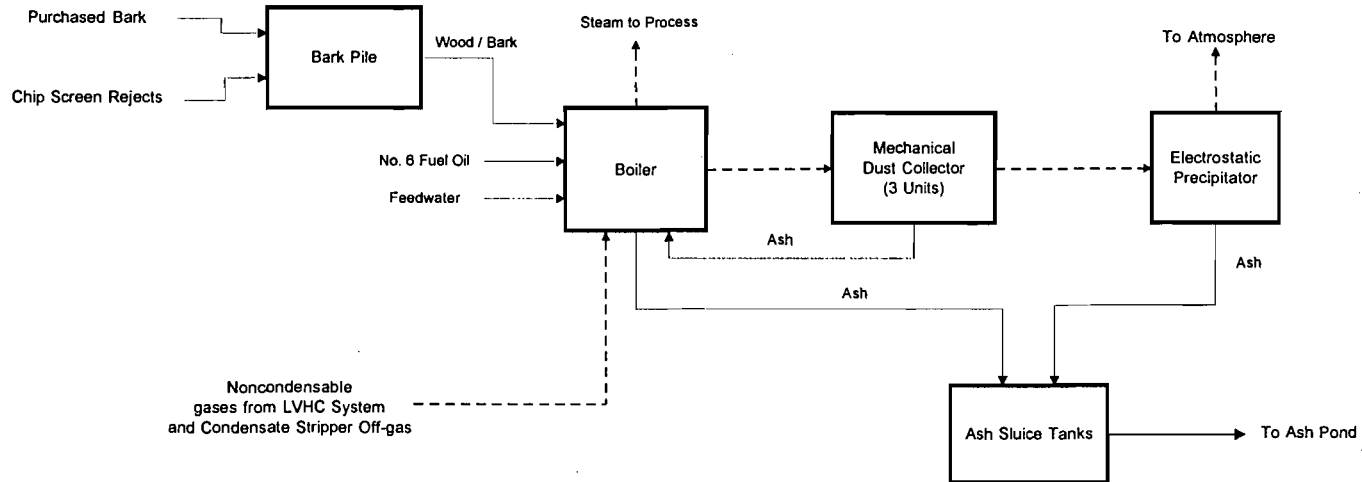
1.	Process Flow Diagram	<input checked="" type="checkbox"/> Attached, Document ID: <u>GP-E02-L1</u>	<input type="checkbox"/> Waiver Requested
		<input type="checkbox"/> Not Applicable	
2.	Fuel Analysis or Specification	<input checked="" type="checkbox"/> Attached, Document ID: <u>GP-E02-L2</u>	<input type="checkbox"/> Waiver Requested
		<input type="checkbox"/> Not Applicable	
3.	Detailed Description of Control Equipment	<input checked="" type="checkbox"/> Attached, Document ID: <u>GP-E02-L3</u>	<input type="checkbox"/> Waiver Requested
		<input type="checkbox"/> Not Applicable	
4.	Description of Stack Sampling Facilities	<input type="checkbox"/> Attached, Document ID: _____	<input type="checkbox"/> Waiver Requested
		<input checked="" type="checkbox"/> Not Applicable	
5.	Compliance Test Report	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable
		<input type="checkbox"/> Previously Submitted, Date: _____	
6.	Procedures for Startup and Shutdown	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable
7.	Operation and Maintenance Plan	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable
8.	Supplemental Information for Construction Permit Application	<input checked="" type="checkbox"/> Attached, Document ID: <u>Attachment A</u>	<input type="checkbox"/> Not Applicable
9.	Other Information Required by Rule or Statute	<input type="checkbox"/> Attached, Document ID: _____	<input checked="" type="checkbox"/> Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Acid Rain Permit Application (Hard Copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

ATTACHMENT GP-E02-L1

PROCESS FLOW DIAGRAM



—————▶ Liquid / Solid

- - - - -▶ Gaseous

LVHC = Low Volume High Concentration

		Revision Record			
		Date: 09 July 99	Title: No. 4 Combination Boiler Flow Diagram File Name: GPEO2L1.VSD		
		Scale:			
		Drawn By: M. Arrants			
		Checked:			
		Approved:	GP-EO2-L1		

ATTACHMENT GP-E02-L2
FUEL ANALYSIS OR SPECIFICATION

ATTACHMENT GP-E02-L2

**NO. 4 COMBINATION BOILER
FUEL ANALYSIS**

Fuel	Density (lb/g) ^b	Weight % Sulfur	Heat Capacity ^b
No. 6 Fuel Oil ^a	8.3	2.5	150,000 Btu/gallon
Bark	----	----	4,500 Btu/lb

Note: This unit is equipped with natural gas igniters which are only used for approximately 10 seconds during startup. Heat input and emissions from the igniters are negligible.

^a Fuel oil may contain on-spec used oil.

^b Based on industry standards. Actual analysis may vary.

ATTACHMENT GP-E02-L3

CONTROL EQUIPMENT

ATTACHMENT GP-E02-L3

CONTROL EQUIPMENT
NO. 4 COMBINATION BOILER

The No. 4 Combination Boiler is equipped with three multiclone dust collectors and an electrostatic precipitator for particulate control.

	Primary Dust Collector	Secondary Dust Collector	Tertiary Dust Collector
Manufacturer	Zurn	Universal Oil Products Co.	Universal Oil Products Co.
Inlet Gas Temp	700 F	400 F	400F
Inlet Gas Flow	280,000 ACFM	225,000 ACFM	225,000 ACFM
Pressure Drop	< 3 inches	3-4 inches	3-4 inches
Control Efficiency	85-90%	85-90%	85-90%

	Electrostatic Precipitator
Manufacturer	Research Cottrell
Inlet Gas Temp (F)	325
Gas Flowrate (ACFM)	455,000
Primary Voltage (V)	0-600
Secondary Voltage (KVDC)	0-90
Primary Current (A)	0-150
Secondary Current (A)	0-1.0
Control Efficiency (%)	99.5

ATTACHMENT A

CLUSTER RULE COMPLIANCE APPLICATION

GEORGIA-PACIFIC CORPORATION

PALATKA, FLORIDA

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1.0 INTRODUCTION

Georgia-Pacific Corporation (G-P) is proposing changes to its Kraft pulp and paper mill located in Palatka, Putnam County, Florida. The pulping system, pulping condensate system, brown stock washing system, total reduced sulfur (TRS) incinerator, and No. 4 Combination Boiler at the Mill will be affected by these changes. The changes are being proposed in order to comply with the Maximum Achievable Control Technology (MACT) regulations promulgated by the U.S. Environmental Protection Agency (EPA). These regulations were promulgated in the Federal Register on April 15, 1998, and are incorporated into Title 40 of the Code of Federal Regulations (CFR), Part 63, Subpart S. Part 63 embodies National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories.

The NESHAPs for the pulp and paper industry, also referred to as the "Cluster Rule" because it comprehensively addresses air, water and solid waste discharges, sets MACT standards for air emissions from pulp and paper sources. The MACT standards are codified in 40 CFR 63.440 through 63.458. The standards apply to all pulp and paper mills that are major sources of hazardous air pollutants (HAPs), and cover the pulping system, bleaching system, low volume high concentration (LVHC) gas collection and control systems, high volume low concentration (HVLC) gas collection and control systems, and pulping condensate system.

The G-P Palatka Pulp Mill consists of the following major plant areas: woodyard, digester system, brown stock washing system, bleaching system, chemical recovery area, paper drying/convertng/warehousing, and power/utilities area. Specific emissions units at G-P Palatka are affected by the MACT requirements. These are described in Section 2.0. A summary of the applicable MACT rules for the pulp and paper industry is presented in the following subsections.

1.1 PULPING SYSTEM STANDARDS

The MACT pulping system standards are contained in 40 CFR 63.443. At existing sources, the LVHC gas streams from the pulping systems equipment must be collected and controlled no later than April 16, 2001. These sources are referred to as the "3-year MACT" sources. The "LVHC system" means the collection of equipment including the digesters, turpentine recovery system, evaporators, steam stripper systems, and any other equipment serving the same function. The LVHC system equipment is required to be collected and controlled 99% of the operating time for this equipment on a semi-annual basis (i.e., only 1% downtime for the control device is allowed), excluding periods of startup, shutdown and malfunction (63.443(e)).

Other sources associated with the pulping system (i.e., knotters, screen systems, pulp washing system, deckers and oxygen delignification systems) are required to be collected and controlled no later than April 16, 2006 (8-year MACT sources). These are the HVLC equipment gas streams. The HVLC system equipment is required to be collected and controlled 96% of the operating time for this equipment on a semi-annual basis (i.e., 4% downtime for the control device, excluding periods of startup, shutdown and malfunction).

If a common control device is used for both the LVHC and HVLC system equipment, then all the equipment is required to be controlled 96% of the operating time for this equipment.

The pulping system sources at G-P covered under the MACT rule are listed in Table 1-1. Also listed is pulping system equipment which does not require control under the MACT regulations.

The pulping system standards require that the designated equipment systems be enclosed and vented in a closed-vent system and routed to a control device that meets one of the following (40 CFR 63.443):

1. Reduces the total HAP emissions by 98% or more on a weight basis;
2. Reduces the total HAP concentration at the outlet of the thermal oxidizer to 20 ppmvd or less, corrected to 10% oxygen; or
3. Reduces the total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 1,600°F and a minimum residence time of 0.75 seconds; or
4. Reduces the total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

Standards for enclosures and closed-vent systems are described in Section 1.5.

The application that G-P Palatka is submitting addresses only the LVHC system sources. These sources are required to be controlled by April 16, 2001. The HVLC system sources are required to be controlled by April 16, 2006, and these sources are not addressed in this application.

1.2 BLEACHING SYSTEM STANDARDS

The MACT standards apply to Kraft pulp bleaching systems that use chlorine or chlorinated compounds (40 CFR 63.445). Separate MACT standards for bleaching apply to dissolving-grade bleaching systems and non-dissolving-grade bleaching systems. The standards for non-dissolving-grade systems must be complied with by April 16, 2001 (i.e., 3-year MACT). The MACT standards for dissolving-grade bleaching systems are deferred until after promulgation of the revised effluent limitation standards for dissolving-grade mills [40 CFR 63.440(d)(2)]. These standards will be promulgated by EPA at a later date. G-P operates a non-dissolving grade bleach plant, and therefore must comply with the MACT standards for bleaching systems by April 16, 2001.

The bleaching system MACT standards require that the equipment at each bleaching stage where chlorinated compounds are introduced be enclosed and vented to a

closed-vent system and routed to a control device that meets one of the following (40 CFR 63.445):

1. Reduces total chlorinated HAPs in the vent stream entering the control device by 99% or more;
2. Achieve a treatment device outlet concentration of 10 ppm or less by volume of total chlorinated HAPs; or
3. Achieves a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAPs per megagram of oven dried pulp (ODP) or less (0.002 lb/ton ODP or less).

For compliance with chloroform standards, the paper grade bleaching lines must comply with the effluent guidelines in 40 CFR 430.24(a)(1) and (e), and 430.26(a) and (c).

The associated enclosures and closed-vent system must meet the requirements of 40 CFR 63.450, as described in Section 1.5. Continuous monitoring system (CMS) requirements include measuring gas scrubber parameters. The parameters which must be monitored for gas scrubbers consist of pH of the gas scrubber liquid effluent, vent gas inlet flow rate, and scrubber liquid influent flow rate [40 CFR 63.453(c)]. During the initial performance tests of the system, scrubber parameter values, averaging time and monitoring frequency must be established, with approval from the Administrator [40 CFR 63.453(n)]. Periodic inspections of the closed-vent system are also required. Recordkeeping and reporting requirements are contained in 40 CFR 63.454 and 63.455, respectively, of the MACT Rule

G-P Palatka has already addressed the bleaching system MACT standards in a separate air construction permit application for a new bleach plant. A construction permit for the new bleach plant was issued by the Florida Department of Environmental Protection (FDEP) in June 1999.

1.3 PULPING PROCESS CONDENSATES STANDARDS

The MACT pulping process condensates standards are contained in 40 CFR 63.446. The standards require that the condensates from the following pulping equipment systems be collected and treated (refer to Table 1-1): digester systems, turpentine recovery system, each feed (weak liquor) stage of the evaporator system, the LVHC gas collection system, and the HVLC gas collection system. The condensate collection and treatment standards must be met no later than April 16, 2001 (3-year MACT). The sources at G-P Palatka covered under the process condensates MACT are listed in Table 1-1.

The Mill can elect one of three methods to comply with the MACT standard for pulping process condensates, as follows:

1. Collect and treat condensates from all pulping equipment systems covered by the rule;
2. Collect and treat the condensates from the HVLC and LVHC equipment systems, plus condensate streams from other covered equipment which in total contain at least 65 % of the total HAP mass from this other covered equipment; or
3. Collect and treat any combination of pulping equipment systems that contain a total HAP mass of 7.2 lb/ton of oven dried pulp (ODP) or more for mills that do not perform bleaching, or 11.1 lb/ton ODP for mills that perform bleaching.

The pulping process condensates must be conveyed in a closed collection system which meets the individual drain system requirements of 40 CFR 63.962 and 63.964 (Subpart RR, NESHAPs for Individual Drain Systems). Closed vent systems and control devices associated with the closed collection system must meet the requirements of 40 CFR 63.443(d) and 63.450, as described above in Section 1.1 for pulping system standards. In addition, if a condensate tank is used in the closed collection system, the tank must have a fixed roof, operated with no detectable leaks,

and vented into a closed vent system and routed to a control device meeting the requirements of 40 CFR 63.450. Standards for enclosures and closed-vent systems are described in Section 1.5.

The pulping systems condensates must be treated according to one of the following options:

1. Recycle the pulping process condensates to a pulping equipment system meeting the MACT requirements for pulping systems as described in Section 1.1 above; or
2. Discharge the condensate below the liquid surface of a biological treatment system which biodegrades the total HAPs by 92 percent or more by weight; or
3. Treat the condensates to reduce or destroy the total HAPs by 92 percent or more by weight; or
4. At mills that do not perform bleaching, treat the condensates to remove 6.6 lb HAPs/ton ODP or more, or achieve a total HAP concentration of 210 ppm or less by weight at the outlet of the control device; or
5. At mills that perform bleaching, treat the condensates to remove 10.2 lb HAPs/ton ODP or more, or achieve a total HAP concentration of 330 ppm or less by weight at the outlet of the control device.

HAPs removed from a pulping process condensate stream during treatment and handling must meet the MACT requirements for pulping systems as described in Section 1.1 above (i.e., enclosure and closed-vent system routed to control device), except sources using biological treatment systems. Also, if a steam stripper system is used to comply with these requirements, the steam stripper must meet a 90% uptime requirement. If a mill produces both bleached and unbleached pulp products, the applicable standard is calculated by prorating the individual standards by the amount of bleached and unbleached pulp produced.

1.4 CLEAN CONDENSATE ALTERNATIVE

The MACT regulations allow the use of clean condensates in process equipment as an alternative to collecting and venting HAP emissions to a control device (see 40 CFR 63.447). The owner or operator must demonstrate that the total HAP reductions achieved by the clean condensate alternative technology are equal to or greater than the total HAP emissions reductions that would have been achieved through compliance with the pulping system standards of 40 CFR 63.443. G-P will be investigating the clean condensate alternative for complying with the 8-year MACT source requirements. If selected, this alternative will be addressed in a future air permit application.

1.5 STANDARDS FOR ENCLOSURES AND CLOSED-VENT SYSTEMS

Minimum requirements for enclosures and closed-vent systems are contained in 40 CFR 63.450. These include maintaining negative pressure at each enclosure or hood opening. For components of the closed-vent system that are operated at positive pressure prior to a control device, the component must be operated with no detectable leaks (i.e., less than 500 ppm above background). Also, any bypass lines in the closed vent system must have a flow indicator capable of detecting any flow in the line every 15 seconds, and any bypass line valves must be computer controlled or have a seal.

Monitoring requirements for enclosures and closed vent systems include visual inspection of the closure mechanism for each enclosure opening every 30 days; inspection of ductwork, piping, enclosures and connections to covers every 30 days for visible evidence of defects; demonstration of no detectable leaks for positive pressure systems initially and annually, and demonstration of negative pressure at each enclosure opening initially and annually.

Recordkeeping and reporting requirements are contained in 40 CFR 63.454 and 63.455, respectively, of the MACT Rule.

Prior to April 15, 1999, G-P submitted the initial notification report for the Palatka Mill to FDEP as required by 40 CFR 63.455(a) for the 3-year MACT sources. The compliance plan for the 8-year MACT sources was also submitted by G-P prior to the April 15, 1999 deadline.

1.7 APPLICATION

This application includes the Florida Department of Environmental Protection's (FDEP) Long-Form Air Permit application form for the following affected emissions units:

- New Thermal Oxidizer for control of TRS and MACT I (3-year) sources (including batch digester system, turpentine condensing system, and multiple effect evaporator system):
 - * New Condensate Stripper and associated foul condensate feed tank
 - * New Thermal Oxidizer for LVHC System and New Condensate Stripper, equipped with SO₂ scrubber
 - * New third effect (body) to be added to the existing pre-evaporator
 - * Shutdown of existing TRS Incinerator and condensate stripper
- No. 4 Combination Boiler
 - * Allow backup incineration of noncondensable (NCG) gases in this boiler

Also included in this application is this attachment, which consists of four (4) sections, including this introduction. The remaining sections are: Section 2.0, Project Description; Section 3.0, Emission Estimates; and Section 4.0, Regulatory Applicability.

Table 1-1. Sources at G-P Palatka Covered Under MACT Air Rules for Kraft Pulp and Paper Mills

Plant System	Covered Sources	Compliance Date	Sources Not Covered
Pulping System			
	<u>LVHC System- *</u>	16-Apr-01	
	Digesters		Digester chip filling
	Evaporators		Liquid streams intended for byproduct recovery
	Turpentine recovery system:		Pulp storage tanks
	Condensers		Sumps
	Decanters		White water tanks
	Turpentine Storage tanks (associated with recovery process)		
	Turpentine decanter underflow		
	Any other liquid streams associated with recovery process		
	Condensate (steam) strippers		
	<u>Knotter system</u>	16-Apr-06	
	After digesting and prior to pulp washing:		
	Knotters		
	Ancillary tanks		
	<u>Screening System</u>	16-Apr-06	
	Pulp screens		Ancillary equipment (i.e., tanks) Pulp storage tanks
	<u>Pulp Washing System-</u>	16-Apr-06	
	Vacuum drum washers		Pulp cleaners
	Horizontal belt filters		White water tanks
	Intermediate stock chests		Sumps
	Associated vacuum pumps, filtrate tanks, foam breakers or tanks		Repulpers
	<u>Decker System</u>	16-Apr-06	
	Decker vents		Sumps
	Filtrate tanks		
	Associated vacuum pumps		
	<u>Weak Liquor Storage Tanks</u>	16-Apr-06	
	Spent liquor tanks prior to evaporator system		Existing weak liquor storage tanks Washer filtrate tanks
	Bleaching System (paper-grade subcategory) **	16-Apr-01	
	All equipment associated with a discrete step of chemical application and removal:		
	Chemical and steam mixers		
	Bleaching towers		
	Washers		
	Seal (filtrate) tanks		
	Vacuum pumps		
	Pulping Process Condensates *	16-Apr-01	
	Digester System Condensates		
	Turpentine Recovery System		
	Multiple Effect Evaporator System		
	LVHC System		

2.0 PROJECT DESCRIPTION

G-P's control strategy and compliance plan for complying with the 3-year MACT regulations at the Palatka Mill are summarized in this section. However, final design engineering and vendor selection has not yet been performed. As a result, the information and specifications presented in this application could change based on vendor selection and final engineering.

2.1 PULPING SYSTEM NONCONDENSABLE GASES

Currently, G-P Palatka incinerates the LVHC NCGs from the batch digester system, the multiple effect evaporator system, the batch digester system turpentine condenser, and condensate stripper in the TRS Incinerator. A wet scrubber using an alkaline scrubbing media removes TRS from the gas stream prior to incineration. The scrubber achieves a 50% minimum TRS removal efficiency. Due to the high reliability of the TRS Incinerator, no backup control device is currently employed (i.e., some NCGs are vented during periods of incinerator downtime).

For complying with the pulping system standards of 40 CFR 63.443, G-P Palatka will collect additional LVHC NCGs from one small source, the turpentine decanter underflow seal tank. All other required NCGs are already being collected and routed to the TRS Incinerator. The seal tank will be a very minor source of additional NCGs. The NCGs from the seal tank will be tied into the existing LVHC gas collection system.

As described in Section 2.2, a new foul condensate collection tank will be added to receive foul condensates from throughout the Mill for subsequent treatment in a new condensate stripper. The NCGs from this new tank and stripper off-gases from the new condensate stripper will be tied into the existing LVHC NCG system and incinerated in a new thermal oxidizer. The existing TRS Incinerator will be shutdown.

The new Thermal Oxidizer will be constructed to accommodate the NCGs from the existing LVHC system, plus the additional NCGs from the new foul condensate tank and stripper off-

*would emissions
change based on
a different vendor.*

gases from the new condensate stripper. The thermal oxidizer will be equipped with a wet scrubber for SO₂ removal. The system will be designed for 95 percent SO₂ removal.

All named sources vented to the LVHC system will meet the "closed collection system" requirement (i.e., no atmospheric vents). This equipment will be installed and operating prior to the April 16, 2001 deadline. Refer to the flow diagrams in the application form.

The MACT standards for pulping systems require that the control device be operational for 96% of the time on a semi-annual basis for the HVLC system, and 99% for the LVHC system, unless a single control device is used for the LVHC and HVLC systems, in which case a 96% uptime on a semi-annual basis is required for the combined system. Florida's existing TRS rules (Rule 62-296.404) allow up to 10 days of venting of TRS emissions per year (i.e., 240 hours/year). This translates into 97.3% uptime on an annual basis. The MACT rules require a 99% uptime for the LVHC system on a semi-annual basis. Since a 99% uptime may not be achievable with the new Thermal Oxidizer on a semi-annual basis, a backup incineration device is required. G-P Palatka will use the No. 4 Combination Boiler as a backup to the new Thermal Oxidizer for incineration of the NCG gas streams.

To implement the backup NCG control system, G-P Palatka will install the appropriate piping to the No. 4 Combination Boiler, as well as appropriate injection nozzles to inject the gases into the primary flame zone of the boiler. The NCG gases will be introduced into the unit with combustion air or through a port located near to the region where other fuels are introduced. This is considered to meet the requirement that the gases be introduced into the primary flame zone of the incineration device.

2.2 PULPING SYSTEM CONDENSATES

G-P Palatka's current compliance plan to meet the MACT requirements for pulping system condensates is to collect 11.1 lb/ton ODP or more of total HAP mass for the portion that is bleached, and 7.2 lb/ton ODP for the portion that is unbleached, from the sources listed in 40

CFR 63.446(b). These streams will then be treated in a new condensate stripper to achieve 92 percent total HAP removal, as required by 40 CFR 63.446(e).

G-P Palatka will collect foul condensate streams from the highest HAP-containing streams first in order to collect the necessary HAP mass. These streams, in order of highest to lowest HAP mass, are: pre-evaporator hotwells, pre-evaporator foul condensates, the turpentine decanter underflow, and pre-evaporator contaminated condensates. The pre-evaporator hotwell and foul condensates are currently being collected and treated in the existing condensate stripper system. The first three streams will need to be collected to satisfy the total HAP mass collection requirements, but only a portion of the remaining streams will need to be collected. The best approach for the G-P Mill will be determined once final engineering studies are complete.

A new steam heated condensate stripper will be installed to treat foul condensate collected from this equipment. The stripper system will be designed for a capacity of 950 gallons per minute (gpm) of condensate and will consist of a new stripper feed tank, condensate filter, condensate stripper, and new reflux condenser.

The foul condensate from the stripper feed tank will be pumped to the stripper. The condensate will then enter the top of the condensate stripper column. Live steam will be added to the bottom of the column where it will contact the foul condensate flowing through the column trays. This liquid/vapor contact will strip volatile components from the condensate. Hot clean condensate will flow from the bottom of the stripper.

The overhead vapors, which contain the volatile components stripped from the condensate, will leave the top of the stripper and flow to the reflux condenser where the vapors will be partially condensed. This condensate will be returned to the stripper. The non-condensed vapors from the reflux condenser containing volatile gases (i.e., methanol), TRS, and water vapor will flow to the proposed thermal oxidizer for destruction. The thermal oxidizer or backup destruction device (No. 4 Combination Boiler) will operate whenever the condensate stripper is operating.

No additional steam usage above the Mill's present demand will be required to operate the new condensate stripper system. This will be accomplished through several activities as described below:

- recycling of existing steam sources
- installation of the new condensate stripper to replace the existing condensate stripper
- adding new third effect to existing black liquor pre-evaporator, and reducing operation of the existing less efficient No. 1 Evaporator system. A new cooling tower will also be installed to serve the evaporator system. This will reduce overall steam usage for the black liquor pre-evaporator/evaporator system

*Adding third effect
to black liquor pre-
evaporator will increase
production throughput
thru the multiple effect
evap. system.*

3.0 EMISSION ESTIMATES

3.1 EMISSIONS IMPACT OF CHANGES TO LVHC SYSTEM

Currently, G-P Palatka collects and incinerates the LVHC NCGs from the batch digester system, multiple effect evaporator system, turpentine recovery system, and existing condensate stripper system, and incinerates them in the existing TRS Incinerator. These sources will continue to be collected in the LVHC system, except for the existing condensate stripper. The existing condensate stripper will be replaced by the new condensate stripper, and a new foul condensate stripper feed tank will be added. The overhead NCGs from these new sources will also be routed to the LVHC system. The LVHC NCGs will be sent to the new thermal oxidizer for destruction, with the No. 4 Combination Boiler as a backup control device.

Based on historical operation of the existing TRS Incinerator, the new thermal oxidizer should achieve a minimum uptime of at least 90 percent. As a result, two scenarios were assessed for potential emission impact: 1) the new thermal oxidizer operating at 100 percent uptime (8,760 hours/year), and 2) the new thermal oxidizer operating at 90 percent uptime (7,884 hours/year), and the No. 4 Combination Boiler serving as backup for 10 percent of the time (876 hours/year).

Estimated potential TRS, SO₂ and sulfuric acid mist (SAM) emissions for the first scenario are shown in Table 3-1. As shown, estimated maximum emissions from the thermal oxidizer are 0.53 ton per year (TPY) for TRS, 236.5 TPY for SO₂, and 9.5 TPY for SAM. TRS emissions are based upon Florida's TRS rule which limits emissions to 5 ppmvd @ 10 percent oxygen. The estimated SO₂ emissions reflect vendor estimates of the maximum sulfur loading in the NCGs based on the maximum permitted pulp production rate of 1,850 TPD ADUP, and 95 percent SO₂ control for the wet scrubbing system. The wet scrubbing system will utilize an alkaline scrubbing medium. SAM emissions are based upon source testing of the existing TRS Incinerator, which showed that SAM emissions are less than 4 percent of SO₂ emissions.

Estimated HAP, volatile organic compound (VOC) and nitrogen oxides (NO_x) emissions from the new thermal oxidizer are shown in Table 3-2. These are based on published NCASI factors for thermal oxidizers. In the case of NO_x emissions, NCASI recently issued a draft document addressing NO_x emissions from thermal oxidizers. It was found that average NO_x emissions from thermal oxidizers burning condensate stripper off-gas were 0.29 lb/oven-dried ton of pulp (ODTP). Maximum emissions are estimated at 1.6 TPY HAPs, 9.1 TPY VOC, and 88.1 TPY NO_x.

Maximum estimated emissions of particulate matter (PM), particulate matter with a particle size less than or equal to 10 microns (PM₁₀), and carbon monoxide (CO) resulting from the new thermal oxidizer are presented in Table 3-3. The PM/PM₁₀ emissions are based on the existing TRS Incinerator limit for PM/PM₁₀ of 5.5 lb/hr, which is considered achievable for the new oxidizer with a wet SO₂ scrubber. EPA Publication AP-42 factors were used for CO.

Estimated potential TRS, SO₂ and SAM emissions for the second scenario (new thermal oxidizer burning NCGs 90 percent of the time, and the No. 4 Combination Boiler burning NCGs 10 percent of the time) are shown in Table 3-4. As shown estimated maximum emissions for this scenario are 0.71 TPY for TRS, 685.9 TPY for SO₂, and 27.4 TPY for SAM. Potential emissions of SO₂ from the No. 4 Combination Boiler are based on the assumption that no SO₂ removal in the boiler will occur. When NCG burning is occurring in the boiler, and the boiler is firing 100% fuel oil, no inherent SO₂ removal in the boiler is expected. However, when the boiler is firing primarily carbonaceous fuel, NCASI studies have demonstrated significant inherent SO₂ removal (see footnote at bottom of Table 3-4). The No. 4 Combination Boiler burns carbonaceous fuel the majority of the time. Since NCG burning in the boiler will only occur a maximum of 10 percent of the time on an annual basis, it is unlikely that the boiler would be firing 100 percent fuel oil at the time that NCGs are being burned. Therefore, the assumption of no inherent SO₂ removal is very conservative.

Due to the nature of the No. 4 Combination Boiler, being a highly effective destruction device for HAPs and VOC, increased emissions of these pollutants are not expected due to NCG

burning. Increased emissions of CO are also not expected from the No. 4 Combination Boiler due to NCG burning. In the case of NO_x emissions, an increase in emissions for the No. 4 Combination Boiler would be expected due to NCG and stripper off-gas burning. However, a concomitant decrease in NO_x emissions from the new thermal oxidizer would also occur, since the ammonia-laden stripper off-gas would be switched from the oxidizer to the boiler. Therefore, increased NO_x emissions from the boiler itself were not quantified. Total project NO_x emissions are accurately represented by the quantification of NO_x emissions from the thermal oxidizer.

Comparison of Tables 3-1 and 3-4 shows that worst case emissions of TRS, SO₂ and SAM due to NCG incineration will occur with the Thermal Oxidizer operating at its minimum operating time (90% uptime), and the No. 4 Combination Boiler incinerating NCGs for the remainder of the time (10% uptime).

Presented in Table 3-5 are estimated current emissions of regulated pollutants from the existing TRS Incinerator. These represent emission reductions for the project, due to the shutdown of the existing incinerator. The emissions are based on reported emissions to the FDEP as contained in the annual operating reports. Estimated current HAP, VOC, and NO_x emissions are presented in Table 3-6. These are based on NCASI factors.

For NO_x, the emission factor is based on the draft NCASI document described previously, which showed that average NO_x emissions for a thermal oxidizer burning LVHC gases increased from 0.04 lb/ODTP to 0.29 lb/ODTP (i.e., increased by 0.25 lb/ODTP) when burning condensate stripper off-gas. G-P is currently burning only a portion (approximately 60%) of the total condensate stripper off-gas that will ultimately be burned (based on estimated TRS loadings for the existing condensate stripper and the proposed future condensate stripper). Therefore, estimated NO_x emissions for the existing TRS Incinerator are expected to be correspondingly less, as shown below:

Were increased
emissions of NO_x
from burning of NCG
in No. 4 Combination
Boiler included in the
total project emissions.

Baseline NO_x emissions (LVHC gas only) = 0.04 lb/ODTP

Future NO_x emissions (LVHC gas + new stripper off-gas) = 0.29 lb/ODTP

Increase in NO_x emissions due to total stripper off-gas = 0.25 lb/ODTP

Existing stripper off-gas = 60% of total future stripper off-gas (based on TRS loading)

Existing TRS Incinerator NO_x emissions = 0.04 + (0.60x0.25) = 0.19 lb/ODTP

3.2 EMISSIONS IMPACT OF CONDENSATE COLLECTION AND TREATMENT

The collection and treatment of foul condensates will impact air emissions in several ways. First, the new foul condensate tank and condensate stripper will create additional sources of HAP, VOC, and TRS emissions. However, as described in Section 3.1, these emissions will be controlled through collection and incineration. The MACT rules require the hard piping of the condensates (i.e., no vents to the atmosphere under normal operation). Therefore, fugitive emissions from open sewers and vessels where such condensates now go will decrease. Because such emissions are difficult to quantify, they are not addressed herein.

The most significant impact upon air emissions resulting from the condensate treatment will be the reduction in fugitive emissions from the brown stock washer system. Currently, G-P uses condensates and Mill whitewater in the washer system. Estimated emissions from the existing brown stock washer system at G-P, based on NCASI factors, are presented in Table 3-7. Estimated emissions are 218.1 TPY HAPs (mainly methanol), 52.1 TPY VOC, and 62.9 TPY TRS.

After the implementation of the new condensate collection and treatment system, evaporator condensates will continue to be used in the brown stock washer system. Based on mill water studies, G-P Palatka currently uses both clean and contaminated evaporator condensates as shower water on the washer lines. The condensate volume is approximately 2,300 gpm at a concentration of about 325 ppm methanol (NCASI studies show that methanol comprises about 90% of all HAPs in the stream). After the condensate collection and treatment project is implemented, the resulting brown stock washer shower water will have a methanol concentration of about 200 ppm.

NCASI has developed a relationship between shower water methanol content and methanol emissions from washer systems as follows:

$$\text{Methanol emissions (lb/ODTP)} = (0.0011 \times \text{ppm}) + 0.375$$

where, ppm = shower water methanol content

Applying this equation to the G-P Palatka conditions yields a methanol emission factor of 0.73 lb/ODTP for current conditions, and 0.60 lb/ODTP after implementation of the condensate collection and treatment project. Thus, the reduction in methanol (and HAPs) is projected to be approximately 20%. This 20% reduction was applied to the NCASI emission factors to estimate the maximum future emissions from the brown stock washer system. These results are shown in Table 3-8. Maximum pulp production for the facility (1,850 TPD ADUP, maximum monthly average) was used to estimate future emissions. The estimated maximum emissions are 203.6 TPY HAPs (mainly methanol), 48.6 TPY VOC, and 58.7 TPY TRS.

3.3 SUMMARY

A summary of estimated emission increases and decreases associated with the activities proposed to comply with the 3-year MACT standards is presented in Table 3-9. As shown, there will be small increases in annual NO_x , CO, PM/PM₁₀, VOC and SAM emissions, but decreases in annual TRS, SO₂ and HAP emissions. There may be an actual increase in SO₂ emissions from the No. 4 Combination Boiler at certain times due to backup incineration of TRS in the boiler. Maximum SO₂ emissions from the boiler could exceed current permit limits during rare times of 100 percent fuel oil burning. An air modeling analysis addressing this aspect of the project is being submitted to FDEP in a separate report.

It is noted that an increase in the sulfidity in the Mill is expected due to the MACT I compliance project. The increase would be related to the recovery of sulfur in the process due to capture of sulfur in the SO₂ scrubber associated with the new thermal oxidizer, with subsequent return of this sulfur to the process. NCASI information indicates that there is no significant effect on

process emissions unless the mill sulfidity exceeds 40 percent. G-P does not expect the mill sulfidity to exceed 40 percent. However, increased sulfur emissions in the LVHC system and from the stripper off-gases will occur, and have been accounted for in the emission estimates.

Table 3-1. TRS, SO2 and SAM Emissions Due to NCG Destruction:
Scenario 1: Proposed Thermal Oxidizer at 8,760 hr/yr

NCG Source	Uncontrolled TRS Emissions (c) (lb/hr)	Potential SO2 Emissions (lb/hr)	SO2 Control Efficiency (%)	Controlled TRS Emission Rate		Controlled SO2 Emission Rate		SAM Emission Rate (e)	
				lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Existing LVHC NCG Gases and Existing Condensate Stripper (a)	435	870	95	--	--	43.5	190.5	1.7	7.6
Additional Condensate Stripper Off-Gas (b)	105	210	95	--	--	10.5	46.0	0.4	1.8
Total	540	1,080		0.12	0.53 (d)	54.0	236.5	2.2	9.5

Notes:

- NCG = noncondensable gases
- TRS = total reduced sulfur
- SO2 = sulfur dioxide
- SAM = sulfuric acid mist

Footnotes:

- (a) Based on vendor information, for pulp production rate of 1,850 TPD ADUP.
- (b) Additional NCG off-gas due to additional condensate collection, processed through new condensate stripper.
Based on vendor information, for pulp production rate of 1,850 TPD ADUP.
The new stripper will process condensate from both the existing condensate stripper and the additional MACT I condensates.
- (c) As sulfur.
- (d) Based on Florida limit of 5 ppmvd @ 10% oxygen and an assumed flow rate of 22,000 dscfm.
- (e) Assumes SAM emissions are equivalent to 4% of SO2 emissions, based on source testing of existing TRS Incinerator, which showed that SAM emissions ranged from 1.9% to 3.2% of SO2 emissions.

Table 3-2. Estimated HAP, VOC and NOx Emission Rates for the Proposed Thermal Oxidizer, Georgia-Pacific, Palatka

Pollutant Name	Emission Factor (lb/ton ADUP) (1)	Permitted Hourly Production Rate (tons/hr ADUP)	Permitted Annual Production Rate (tons/yr ADUP)	Emission Rate (3)	
				lb/hr	TPY
<u>Hazardous Air Pollutants</u>					
Acetaldehyde	7.2E-05	118	675,250	8.5E-03	2.4E-02
Acrolein	ND	118	675,250	--	--
Benzene	1.5E-04	118	675,250	1.8E-02	5.1E-02
Carbon Disulfide	ND	118	675,250	--	--
Carbon Tetrachloride	5.1E-04	118	675,250	6.0E-02	1.7E-01
Carbonyl Sulfide	ND	118	675,250	--	--
Chlorobenzene	ND	118	675,250	--	--
Chloroform	ND	118	675,250	--	--
Cresol	ND	118	675,250	--	--
Cumene	ND	118	675,250	--	--
1,2 Dichloroethane	ND	118	675,250	--	--
1,2 Dichloroethylene	1.1E-04	118	675,250	1.3E-02	3.7E-02
Formaldehyde	7.0E-05	118	675,250	8.3E-03	2.4E-02
Hexachlorocyclopentadiene	ND	118	675,250	--	--
Hexachloroethane	ND	118	675,250	--	--
n-Hexane	2.8E-05	118	675,250	3.3E-03	9.5E-03
Methanol	3.5E-03	118	675,250	4.1E-01	1.2E+00
Methyl Ethyl Ketone	7.7E-05	118	675,250	9.1E-03	2.6E-02
Methyl Isobutyl Ketone	ND	118	675,250	--	--
Methylene Chloride	ND	118	675,250	--	--
Phenol	ND	118	675,250	--	--
Styrene	6.1E-05	118	675,250	7.2E-03	2.1E-02
Tetrachloroethylene	ND	118	675,250	--	--
Toluene	ND	118	675,250	--	--
1,2,4-Trichlorobenzene	5.3E-05	118	675,250	6.3E-03	1.8E-02
1,1,2-Trichloroethane	ND	118	675,250	--	--
Trichloroethylene	ND	118	675,250	--	--
m,p-Xylene	2.2E-05	118	675,250	2.6E-03	7.4E-03
o-Xylenes	1.2E-05	118	675,250	1.4E-03	4.1E-03
Total HAPs	4.7E-03			0.55	1.6
Total Hydrocarbons (EPA Method 25A)	2.7E-02	118	675,250	3.19	9.1
Nitrogen Oxides (2)	2.9E-01	106	607,725	30.74	88.1
<u>Non Regulated Pollutants</u>					
Acetone	2.9E-04	118	675,250	3.4E-02	9.8E-02
Alpha-Pinene	ND	118	675,250	--	--
Beta-Pinene	7.0E-05	118	675,250	8.3E-03	2.4E-02
1,2-Dichloroethane	ND	118	675,250	--	--
Ethanol	ND	118	675,250	--	--
Terpenes	2.5E-02	118	675,250	3.0E+00	8.4E+00

Notes:

ND = Non Detectable

ADTUP = Air Dried Unbleached Pulp

lb/hr = pounds per hour

TPY = tons per year

Footnotes:

(1) All emission factors (except NOx) are based on data in NCASI Technical Bulletin No. 701: Compilation of Air Toxic and Total Hydrocarbon Emission Data for Sources at Chemical Wood Pulp Mills, October 1995, Table 9.

Average emission factor was used, except for VOC, highest factor used to be conservative.

(2) Based on draft NCASI Technical Bulletin. Emission factor and production rate is in terms of lbs/oven-dried tons of pulp (lb/ODTP).

(3) Hourly emissions based on maximum hourly production rate. Annual emissions based on maximum annual production rate.

Table 3-3. Maximum Emissions of Other Pollutants From Proposed Thermal Oxidizer, G-P Palatka

Regulated Pollutant	Natural Gas Burning				Methanol Burning				Total Annual Emissions (TPY)
	Emission Factor	Ref.	Activity Factor	Annual Emissions (TPY)	Emission Factor	Ref.	Activity Factor	Annual Emissions (TPY)	
Particulate Matter (PM)	5.5 lb/hr	1	8,760 hr/yr	24.1	--- included in natural gas ---				24.1
Particulate Matter (PM10)	5.5 lb/hr	1	8,760 hr/yr	24.1	--- included in natural gas ---				24.1
Carbon monoxide	84 lb/MMscf	2	7.88 MMscf/yr	0.3	3.2 lb/1000 gal	3	1,182,600 gal/yr	1.9	2.2

References:

1. Based on testing of existing incinerator and considering new wet scrubber.
2. AP-42 factors for natural gas firing (Section 1.4).
3. AP-42 factors for LPG combustion (Section 1.5).

Notes:

1. Natural gas usage based on 900 scf/hr @ 8,760 hr/yr
2. Methanol usage based on 135 gal/hr (24-hr avg.) @ 8,760 hr/yr.

Table 3-4. TRS, SO2 and SAM Emissions Due to NCG Destruction:
Scenario 2: Proposed Thermal Oxidizer at 90% Uptime; No. 4 Combination Boiler at 10% Uptime

NCG Source	Uncontrolled TRS Emissions (c) (lb/hr)	Uncontrolled SO2 Emissions (lb/hr)	SO2 Control Efficiency (%)	Controlled TRS Emission Rate		Maximum SO2 Emission Rate		Maximum SAM Emission Rate (g)	
				lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
<u>New Thermal Oxidizer @ 90% Uptime</u>									
Existing LVHC NCG Gases and Existing Condensate Stripper (a)	435	870	95	--	--	43.5	171.5	1.7	6.9
Additional Condensate Stripper Off-Gas (b)	105	210	95	--	--	10.5	41.4	0.4	1.7
Subtotal	540	1,080		0.12 (e)	0.47	54.0	212.9	2.2	8.5
<u>No. 4 Combination Boiler @ 10% Uptime</u>									
Existing LVHC NCG Gases and Existing Condensate Stripper (a)	435	870	0 (d)	--	--	870.0	381.1	34.8	15.2
Additional Condensate Stripper Off-Gas (b)	105	210	0 (d)	--	--	210.0	92.0	8.4	3.7
Subtotal	540	1,080		0.54 (f)	0.24	1,080.0	473.0	43.2	18.9
TOTALS					0.71		685.9		27.4

Notes: NCG = noncondensable gases; TRS = total reduced sulfur; SO2 = sulfur dioxide; SAM = sulfuric acid mist

Footnotes:

- (a) Based on vendor information, for pulp production rate of 1,850 TPD ADUP.
- (b) Additional NCG off-gas due to additional condensate collection, processed through new condensate stripper.
Based on vendor information, for pulp production rate of 1,850 TPD ADUP.
The new stripper will process condensate from both the existing condensate stripper and the additional MACT I condensates.
- (c) As sulfur.
- (d) No removal of SO2 in No. 4 Combination Boiler is assumed. However, SO2 removal could average 34% or higher when burning carbonaceous fuels.
Sulfur capture derivation: tons bark at 75% load = 42.7; sulfur input due to TRS burning = 540; tons wood per lb sulfur input = $x = 0.0791$
 $\% \text{ capture} = 122.34 * x^{0.5} = 34\%$
- (e) Based on Florida limit of 5 ppmvd @ 10% oxygen and thermal oxidizer flow rate of 22,000 dscfm, and No. 4 Combination Boiler flow rate of 101,000 dscfm.
- (f) Based on 99.9% destruction of TRS in the boiler.
- (g) Assumes SAM emissions are equivalent to 4% of SO2 emissions, based on source testing of existing TRS Incinerator, which showed that SAM emissions ranged from 1.9% to 3.2% of SO2 emissions.

Table 3-5. Current Actual Emissions From Existing TRS Incinerator, Georgia-Pacific, Palatka

Regulated Pollutant	TRS Burning			Natural Gas Burning			Total Annual Emissions (TPY)
	1997 AOR (TPY)	1998 AOR (TPY)	Average Emissions (TPY)	1997 AOR (TPY)	1998 AOR (TPY)	Average Emissions (TPY)	
Particulate Matter (PM)	20.5	20.6	20.6	--	--	--	20.6
Particulate Matter (PM10)	20.5	20.6	20.6	--	--	--	20.6
Sulfur dioxide	733.7	765.9	749.8	0.004	0.002	0.003	749.8
Carbon monoxide	--	--	--	0.4	0.2	0.3	0.3
Sulfuric acid mist	29.6	24.1	26.9	--	--	--	26.9
Total reduced sulfur	0.3	0.3	0.3	--	--	--	0.3

Source: Annual Operating Reports submitted to FDEP.

Table 3-6. Estimated HAP, VOC and NO_x Emission Rates for the Existing TRS Incinerator, Georgia-Pacific, Palatka

Pollutant Name	Emission Factor (1) (lb/ADTUBP)	Actual Maximum Daily Production Rate (2) (ADTUBP/day)	Actual Annual Production Rate (3) (ADTUBP/yr)	Emission Rate (4)	
				lb/hr	TPY
<u>Hazardous Air Pollutants</u>					
Acetaldehyde	7.2E-05	1,850	578,667	5.6E-03	2.1E-02
Acrolein	ND	1,850	578,667	--	--
Benzene	1.5E-04	1,850	578,667	1.2E-02	4.3E-02
Carbon Disulfide	ND	1,850	578,667	--	--
Carbon Tetrachloride	5.1E-04	1,850	578,667	3.9E-02	1.5E-01
Carbonyl Sulfide	ND	1,850	578,667	--	--
Chlorobenzene	ND	1,850	578,667	--	--
Chloroform	ND	1,850	578,667	--	--
Cresol	ND	1,850	578,667	--	--
Cumene	ND	1,850	578,667	--	--
1,2 Dichloroethane	ND	1,850	578,667	--	--
1,2 Dichloroethylene	1.1E-04	1,850	578,667	8.5E-03	3.2E-02
Formaldehyde	7.0E-05	1,850	578,667	5.4E-03	2.0E-02
Hexachlorocyclopentadiene	ND	1,850	578,667	--	--
Hexachloroethane	ND	1,850	578,667	--	--
n-Hexane	2.8E-05	1,850	578,667	2.2E-03	8.1E-03
Methanol	3.5E-03	1,850	578,667	2.7E-01	1.0E+00
Methyl Ethyl Ketone	7.7E-05	1,850	578,667	5.9E-03	2.2E-02
Methyl Isobutyl Ketone	ND	1,850	578,667	--	--
Methylene Chloride	ND	1,850	578,667	--	--
Phenol	ND	1,850	578,667	--	--
Styrene	6.1E-05	1,850	578,667	4.7E-03	1.8E-02
Tetrachloroethylene	ND	1,850	578,667	--	--
Toluene	ND	1,850	578,667	--	--
1,2,4-Trichlorobenzene	5.3E-05	1,850	578,667	4.1E-03	1.5E-02
1,1,2-Trichloroethane	ND	1,850	578,667	--	--
Trichloroethylene	ND	1,850	578,667	--	--
m,p-Xylene	2.2E-05	1,850	578,667	1.7E-03	6.4E-03
o-Xylenes	1.2E-05	1,850	578,667	9.3E-04	3.5E-03
Total HAPs	4.7E-03			0.36	1.3
Total Hydrocarbons (EPA Method 25A)	1.1E-02	1,850	578,667	0.85	3.2
Nitrogen Oxides (5)	1.9E-01	1,665	520,800	13.18	49.5
<u>Non Regulated Pollutants</u>					
Acetone	2.9E-04	1,850	578,667	2.2E-02	8.4E-02
Alpha-Pinene	ND	1,850	578,667	--	--
Beta-Pinene	7.0E-05	1,850	578,667	5.4E-03	2.0E-02
1,2-Dichloroethane	ND	1,850	578,667	--	--
Ethanol	ND	1,850	578,667	--	--
Terpenes	2.5E-02	1,850	578,667	1.9E+00	7.2E+00

Notes:

ND = Non Detectable

ADTUBP = Air Dried Tons of Unbleached Pulp

lb/hr = pounds per hour

TPY = tons per year

Footnotes:

- All emission factors (except NO_x) are based on data in NCASI Technical Bulletin No. 701: Compilation of Air Toxic and Total Hydrocarbon Emission Data for Sources at Chemical Wood Pulp Mills, October 1995, Table 9. Average emission factor was used.
- Based on actual maximum historic daily production rate.
- Activity factor based on average 1997 and 1998 pulp production of 568,205 ADTUBP and 589,128 ADTUBP, respectively.
- Hourly emissions based on maximum historical daily production rate. Annual emissions based on actual annual production rate.
- Based on draft NCASI technical bulletin: see text for details. Emission factor and production rate is in terms of lbs/oven-dried ton of pulp (lb/ODTP).

Table 3-7. Estimated Current Emissions from the Brownstock Washer System, Georgia-Pacific, Palatka

Pollutant	Emission Factor (a) lb/ton ADUP	Activity Factor (a)		Emission Rate	
		Maximum Hourly (tons/hr ADUP)	Annual (tons/yr ADUP)	Maximum Hourly (lb/hr)	Annual (IPY)
<u>Hazardous Air Pollutants</u>					
acetaldehyde	1.5E-02	118	578,667	1.8E+00	4.3E+00
acrolein	1.8E-05	118	578,667	2.1E-03	5.2E-03
benzene	4.7E-06	118	578,667	5.5E-04	1.4E-03
carbon disulfide	1.9E-07	118	578,667	2.2E-05	5.5E-05
carbon tetrachloride	9.0E-05	118	578,667	1.1E-02	2.6E-02
chlorobenzene	3.7E-07	118	578,667	4.4E-05	1.1E-04
chloroform	1.0E-04	118	578,667	1.2E-02	2.9E-02
1,2-dichloroethane	3.3E-05	118	578,667	3.9E-03	9.5E-03
ethyl benzene	1.2E-03	118	578,667	1.4E-01	3.5E-01
formaldehyde	1.9E-03	118	578,667	2.2E-01	5.5E-01
n-hexane	5.3E-06	118	578,667	6.3E-04	1.5E-03
methanol	7.4E-01	118	578,667	8.7E+01	2.1E+02
methyl ethyl ketone	3.2E-03	118	578,667	3.8E-01	9.3E-01
methyl isobutyl ketone	1.2E-05	118	578,667	1.4E-03	3.5E-03
methylene chloride	6.4E-05	118	578,667	7.6E-03	1.9E-02
phenol	7.9E-04	118	578,667	9.3E-02	2.3E-01
styrene	1.8E-04	118	578,667	2.1E-02	5.2E-02
tetrachloroethylene	4.7E-04	118	578,667	5.5E-02	1.4E-01
toluene	2.3E-05	118	578,667	2.7E-03	6.7E-03
1,2,4-trichlorobenzene	9.7E-05	118	578,667	1.1E-02	2.8E-02
1,1,1-trichloroethane	1.9E-06	118	578,667	2.2E-04	5.5E-04
1,1,2-trichloroethane	7.4E-07	118	578,667	8.7E-05	2.1E-04
trichloroethylene	9.7E-05	118	578,667	1.1E-02	2.8E-02
vinyl chloride	5.1E-04	118	578,667	6.0E-02	1.5E-01
m,p-xylene	9.0E-07	118	578,667	1.1E-04	2.6E-04
o-xylene	5.6E-06	118	578,667	6.6E-04	1.6E-03
Total HAPs	0.76			90.1	221.0
Total Hydrocarbons (EPA Method 25A)	0.18	118	578,667	0.9	52.1
<u>Reduced Sulfur Compounds</u>					
dimethyl disulfide	6.9E-02	118	578,667	8.1E+00	2.0E+01
dimethyl sulfide	1.4E-01	118	578,667	1.7E+01	4.1E+01
methyl mercaptan	8.3E-03	118	578,667	9.8E-01	2.4E+00
Total Reduced Sulfur	0.22			25.6	62.9
<u>Non Regulated Pollutants</u>					
acetone	4.2E-02	118	578,667	5.0E+00	1.2E+01
alpha-pinene	1.2E-02	118	578,667	1.4E+00	3.5E+00
beta-pinene	3.4E-03	118	578,667	4.0E-01	9.8E-01
1,2-dichloroethylene	1.4E-04	118	578,667	1.7E-02	4.1E-02
terpenes	1.9E-01	118	578,667	2.2E+01	5.5E+01

ADUP = air-dried unbleached pulp.

References:

1. NCASI T.B. No. 701, for vacuum brown stock washers, average factors used, Table 5, pg. 70.

Footnotes:

(a) Activity factor is based on the average of 1997 pulp production (568,205 tons ADUP) and 1998 pulp production (589,128 tons ADUP) for the mill.

Table 3-8. Estimated Maximum Emissions from the Brownstock Washer System With Condensate Treatment, Georgia-Pacific Palatka

Pollutant	Emission Factor (a) lb/ton ADUP	Activity Factor (b)		Emission Rate	
		Maximum Hourly (tons/hr ADUP)	Annual (tons/yr ADUP)	Maximum Hourly (lb/hr)	Annual (TPY)
<u>Hazardous Air Pollutants</u>					
acetaldehyde	1.2E-02	118	675,250	1.42E+00	4.1E+00
acrolein	1.4E-05	118	675,250	1.70E-03	4.9E-03
benzene	3.8E-06	118	675,250	4.44E-04	1.3E-03
carbon disulfide	1.5E-07	118	675,250	1.79E-05	5.1E-05
carbon tetrachloride	7.2E-05	118	675,250	8.50E-03	2.4E-02
chlorobenzene	3.0E-07	118	675,250	3.49E-05	1.0E-04
chloroform	8.0E-05	118	675,250	9.44E-03	2.7E-02
1,2-dichloroethane	2.6E-05	118	675,250	3.12E-03	8.9E-03
ethyl benzene	9.6E-04	118	675,250	1.13E-01	3.2E-01
formaldehyde	1.5E-03	118	675,250	1.79E-01	5.1E-01
n-hexane	4.2E-06	118	675,250	5.00E-04	1.4E-03
methanol	5.9E-01	118	675,250	6.99E+01	2.0E+02
methyl ethyl ketone	2.6E-03	118	675,250	3.02E-01	8.6E-01
methyl isobutyl ketone	9.6E-06	118	675,250	1.13E-03	3.2E-03
methylene chloride	5.1E-05	118	675,250	6.04E-03	1.7E-02
phenol	6.3E-04	118	675,250	7.46E-02	2.1E-01
styrene	1.4E-04	118	675,250	1.70E-02	4.9E-02
tetrachloroethylene	3.8E-04	118	675,250	4.44E-02	1.3E-01
toluene	1.8E-05	118	675,250	2.17E-03	6.2E-03
1,2,4-trichlorobenzene	7.8E-05	118	675,250	9.16E-03	2.6E-02
1,1,1-trichloroethane	1.5E-06	118	675,250	1.79E-04	5.1E-04
1,1,2-trichloroethane	5.9E-07	118	675,250	6.99E-05	2.0E-04
trichloroethylene	7.8E-05	118	675,250	9.16E-03	2.6E-02
vinyl chloride	4.1E-04	118	675,250	4.81E-02	1.4E-01
m,p-xylene	7.2E-07	118	675,250	8.50E-05	2.4E-04
o-xylene	4.5E-06	118	675,250	5.29E-04	1.5E-03
Total HAPs	0.61			72.1	206.3
Total Hydrocarbons (EPA Method 25A)	1.4E-01	118	675,250	0.7	48.6
<u>Reduced Sulfur Compounds</u>					
dimethyl disulfide	5.5E-02	118	675,250	6.51E+00	1.9E+01
dimethyl sulfide	1.1E-01	118	675,250	1.32E+01	3.8E+01
methyl mercaptan	6.6E-03	118	675,250	7.84E-01	2.2E+00
Total Reduced Sulfur	0.17			20.5	58.7
<u>Non Regulated Pollutants</u>					
acetone	3.4E-02	118	675,250	3.96E+00	1.1E+01
alpha-pinene	9.6E-03	118	675,250	1.13E+00	3.2E+00
beta-pinene	2.7E-03	118	675,250	3.21E-01	9.2E-01
1,2-dichloroethylene	1.1E-04	118	675,250	1.32E-02	3.8E-02
terpenes	1.5E-01	118	675,250	1.79E+01	5.1E+01

References:

1. NCASI T.B. No. 701, for vacuum brown stock washers, average factors used, Table 5, pg. 70.

Footnotes:

(a) Based on 50% of emission factor applicable to BSW's prior to condensate treatment.

(b) Activity factor is based maximum total pulp processed through each line and total for the mill (total = 675,396 ADTUP/yr).

Table 3-9. Net Emissions Changes Due to Cluster Rule Compliance Project, Georgia-Pacific, Palatka

Source Description	Pollutants Emission Rate (TPY)							
	SO2	NOx	CO	PM/PM10	TRS	VOC	SAM	HAPs
<u>Proposed Modifications</u>								
I. New Thermal Oxidizer (a)	212.9	88.1	2.2	24.1	0.47	9.1	8.5	1.6
II. No. 4 Combination Boiler (a)	473.0	--	--	--	0.24	--	18.9	--
III. Brown Stock Washing with Condensate Treatment	--	--	--	--	58.7	48.6	--	206.3
<u>Total Proposed Modifications</u>	685.9	88.1	2.2	24.1	59.4	57.7	27.4	207.9
<u>Existing Emissions</u>								
I. Existing Thermal Oxidizer	749.8	49.5	0.3	20.6	0.3	3.2	26.9	1.3
II. Brown Stock Washing System	--	--	--	--	62.9	52.1	--	221.0
<u>Total Existing Emissions</u>	749.8	49.5	0.3	20.6	63.2	55.3	26.9	222.3
PROJECT NET CHANGE	-63.9	38.6	1.9	3.5	-3.8	2.4	0.5	-14.4

(a) Worst case for overall project TRS, SO2 and SAM emissions is Thermal Oxidizer @ 90% uptime, with No. 4 Combination Boiler @ 10% uptime for NCG burning. For all other pollutants, emissions are based on Thermal Oxidizer operating 100% of the time.

4.0 REGULATORY APPLICABILITY

4.1 MACT STANDARDS

4.1.1 HAP STANDARDS

The MACT standards for the pulp & paper industry, in many cases, allow alternative methods of complying with the standards and controlling HAPs. For example, the condensate collection and treatment requirements allow the condensates to be treated in a biological treatment system or condensate stripper, or recycled to equipment that is vented to a control device.

Although the plans presented in this application are based on G-P Palatka's current plans, some of these plans could change in the future prior to implementation. As a result, G-P Palatka retains the ability to use other feasible control methods and measures to comply with the MACT regulations. G-P Palatka will notify the FDEP as soon as practical when and if such plans change. It is requested that a permit condition be added to the construction permits issued for the MACT compliance projects that allows the ability to utilize other feasible control options.

4.1.2 MONITORING REQUIREMENTS

Since G-P will be utilizing a thermal oxidizer and a combination boiler for incineration of NCGs, continuous emission monitoring systems (CEMS) for this equipment is not required by the MACT standards. Injecting the NCGs into the primary flame zone of the boiler satisfies the MACT requirements. For thermal oxidizers, continuous monitoring requirements consist of monitoring the temperature in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs (40 CFR 63.453(b)).

G-P Palatka will be using closed-vent systems and incineration to comply with the MACT standards for pulping system gases. As a result, the closed-vent system inspection requirements of 40 CFR 63.453(k) must be followed. These standards require that inspections be performed at least once every 30 days, with corrective actions if deficiencies are found.

For the condensate collection system, G-P Palatka will be using a closed collection system to comply with the MACT standards for pulping process condensates. As a result, the closed collection system inspection requirements of 40 CFR 63.453(l) must be complied with, which require that the standards in 40 CFR 63.964 of Subpart RR be met. These standards require that inspections be performed at least once every 30 days, with corrective actions if deficiencies are found.

Appropriate parameters to be continuously monitored for the condensate collection system must be determined through initial performance testing, and a monitoring plan must be submitted to the Administrator based on the initial testing. After approval, the established parameters must be monitored according to the frequency established in the plan. G-P Palatka will submit the plan for the initial performance testing prior to operation of the condensate treatment system.

The new condensate stripper must meet the continuous monitoring requirements contained in 40 CFR 63.453(g). These include monitoring the process wastewater feed rate, the steam feed rate, and the process wastewater column feed temperature.

4.1.3 RECORDKEEPING AND REPORTING REQUIREMENTS

Recordkeeping and reporting requirements are contained in sections 40 CFR 63.454 and 63.455, respectively, of the MACT rule. For the closed-vent system, a site-specific inspection plan must be developed and specific information recorded.

4.2 NEW SOURCE PERFORMANCE STANDARDS

Federal New Source Performance Standards (NSPS) for Kraft pulp mills have been established under 40 CFR 60, Subpart BB. The NSPS cover sources such as the digester system, multiple effect evaporator system, condensate stripper and recovery boilers. Since G-P will be installing a new condensate stripper, it will be subject to Subpart BB. Applicable requirements under Subpart BB are as follows:

- TRS gases from the condensate stripper system, if combusted in a thermal oxidizer, must be subjected to a minimum temperature of 1,200 degrees F for at least 0.5 seconds (40 CFR 60.283(a)(1)(iii)).
- A monitoring device must be installed which measures and records the combustion temperature at the point of incineration. The monitoring device must be certified by the manufacturer to be accurate within 1 percent of the temperature being measured (40 CFR 60.284(b)(1)).

The MACT rules require collection and treatment of condensate steam stripper off-gas. The stripper off-gas, which is defined as part of the LVHC noncondensable gas system, can be treated using a thermal oxidizer designed for a minimum temperature of 1,600 degrees F and a minimum residence time of 0.75 seconds (40 CFR 63.443(d)(3)). G-P will employ this method of treatment, and since these thermal oxidizer design requirements are more stringent than the NSPS design requirements, the condensate stripper/thermal oxidizer will comply with the NSPS. The MACT rules also require a continuous temperature monitor at the point of incineration of the NCGs (40 CFR 63.453(b)), and therefore this requirement also satisfies the NSPS. The NSPS requires that the temperature monitor be certified to be accurate within plus or minus 1 percent of the temperature being measured.

It is also noted that the No. 4 Combination Boiler does not become subject to NSPS due to the incineration of TRS gases in the boiler. The NSPS rules specifically exempt the addition of any system or device whose primary function is the reduction of air pollutants (40 CFR 60.14(e)(5)). The proposed use of the No. 4 Combination Boiler as a backup incineration device meets this exemption.

4.3 PREVENTION OF SIGNIFICANT DETERIORATION

As presented in Section 3.0, Table 3-9, the proposed MACT compliance project will not result in a significant net emissions increase of any PSD pollutant. As a result, PSD review does not apply to the proposed project. However, since an increase in maximum SO₂ emissions from the

No. 4 Combination Boiler may result from this project, an atmospheric dispersion modeling analysis was conducted to evaluate ambient impacts under this operating scenario. The results of this analysis are contained in a separate modeling report.