Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

May 12, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David Spraley, Vice President, Operations
Georgia-Pacific Corporation
Post Office Box 919
Palatka, Florida 32178-0919

Re: DEP File No. 1070005-006-AC (PSD-FL-264)
Palatka Mill
No. 3 Bleach Plant

Dear Mr. Spraley:

Enclosed is one copy of the Draft Permit, Technical Evaluation and Preliminary Determination, for the referenced project in Putnam County. The Department's Intent to Issue Permit and the "PUBLIC NOTICE OF INTENT TO ISSUE" are also included.

The "Public Notice of Intent to Issue Permit" must be published as soon as possible in a newspaper of general circulation in the area affected. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section, at the above letterhead address. If you have any questions, please call Syed Arif at 850/921-9528.

Sincerely,

C. H. Fancy, P.E., Chief,
Bureau of Air Regulation

CHF/sa

Enclosures

In the Matter of an
Application for Permit by:

Mr. David Spraley,
Vice President, Operations
Georgia-Pacific Corporation
Post Office Box 919
Palatka, FL 32178-0919

DEP File No. 1070005-006-AC
DRAFT Permit No. PSD-FL-264
Palatka Mill
No. 3 Bleach Plant
Putnam County

INTENT TO ISSUE PSD PERMIT

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue a permit under the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality (copy of Draft PSD Permit attached) for the proposed project, detailed in the application specified above and the attached Technical Evaluation and Preliminary Determination, for the reasons stated below.

The applicant, Georgia-Pacific Corporation, applied on February 9, 1999, to the Department for a PSD permit to install a new elemental chlorine-free (ECF) bleach plant along with associated equipment and will replace two existing bleach plants at its existing Palatka Mill in Putnam County, Florida.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit and a determination of Best Available Control Technology for the control of carbon monoxide is required to conduct the work.

The Department intends to issue this PSD permit based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emissions units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue PSD Permit." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one of significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below.

The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850-488-0114; Fax 850/922-6979). The Department suggests that you publish the notice within thirty days of receipt of this letter. You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S., to the office of the Department issuing the permit or other authorization. Failure to publish the notice and provide proof of publication may result in the denial of

the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of thirty (30) days from the date of publication of "Public Notice of Intent to Issue PSD permit." Written comments and requests for a public meeting should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for a administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S.,or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding offer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code (F.A.C.)

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.302, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Executed in Tallahassee, Florida.

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE PSD PERMIT (including the PUBLIC NOTICE, Technical Evaluation and Preliminary Determination, Draft BACT Determination, and the DRAFT PSD permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5-12-99 to the person(s) listed:

David Spraley, Georgia-Pacific Corp. *
Joe Taylor, Georgia-Pacific Corp.
Rita Felton-Smith, DEP NE District
David Buff, Golder Associates
Gregg Worley, EPA Region IV
Ellen Porter, USFWS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52, Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.

Kyni Joben (Clerk) 5-12-99 (Date)

Z 333 618 146

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

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Sent to David Sprakey	
Street & Number Ga-Pacific	
Post Office, State, & ZIP Code Palatka Fl	
Postage	$
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Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 5#12-99	
107005-006-AC PSD-FI-264	

PS Form **3800**, April 1995

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- ...our name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
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Consult postmaster for fee.

3. Article Addressed to:
David Sprakey, VP
GA.-Pacific Corp
PO Box 919
Palatka, Fl
32178-0919

4a. Article Number Z 333 618 146

4b. Service Type

☐ Registered ☒ Certified
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7. Date of Delivery MAY 1 1999

PALATKA FL 32177

USPS

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X Marshall Mahaffey

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

PUBLIC NOTICE OF INTENT TO ISSUE PSD PERMIT

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 1070005-006-AC (PSD-FL-264)
Putnam County, Florida

The Department of Environmental Protection (Department) gives notice of its intent to issue a permit under the requirements for the Prevention of Significant Deterioration of Air Quality (PSD permit) to Georgia-Pacific Corporation. The permit is to construct a new elemental chlorine-free bleach plant and associated equipment. It will replace two bleach plants at the existing Palatka Mill in Putnam County, Florida. The project is being implemented to meet the Maximum Achievable Control Technology (MACT) regulations for the pulp and paper industry (40 CFR 63, Subpart S). The modification will allow the facility to move forward to comply with the MACT regulations and to meet the compliance deadline. A Best Available Control Technology (BACT) determination was required for carbon monoxide (CO) pursuant to Rule 62-212.400, F.A.C.

The applicant's name and address are Georgia-Pacific Corporation, Post Office Box 919, Palatka, Florida 32178-0919. The Palatka Mill is located at North of CR 216 and West of US 17, Palatka, Putnam County, Florida.

Carbon monoxide emissions from the new bleach plant will be controlled through good combustion practices.

The net emissions increase due to the new bleach plant for PSD applicability purposes is summarized below (in tons per year).

Pollutant	Net Emissions Increase	PSD Significant Emission Rate
CO	153	100

An air quality impact analysis was conducted for carbon monoxide. Emissions from the facility will not significantly contribute to or cause a violation of any state or federal ambient air quality standards.

The Department will accept written comments and requests for a public meeting concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of this "Public Notice of Intent to Issue PSD permit." Written comments and requests for a public meeting should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400. Any written comments filed shall be made available for public inspection.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under Section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of

NOTICE TO BE PUBLISHED
IN THE NEWSPAPER

the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any which shall be the address for service purposes during the course of the proceeding; and explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material facts. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301 of the Florida Administrative Code.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the petition taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 South Magnolia Drive, Suite 4
Tallahassee, Florida 32301
Telephone: 850/488-1344
Fax: 850/922-6979

Department of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: 904/448-4300
Fax: 904/448-4366

The complete project file includes the Draft Permit, the application and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, Florida Statutes. Interested persons may contact the New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

GEORGIA-PACIFIC CORPORATION

Kraft Pulp Mill
Palatka, Putnam County

DEP File No. 1070005-006-AC
PSD-FL-264

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

May 10, 1999

1. APPLICATION INFORMATION

1.1 Applicant Name and Address

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

Authorized Representative: Mr. David Spraley, V.P., Operations

1.2 Reviewing and Process Schedule

02-09-99: Date of Receipt of Application
03-09-99: DEP Completeness Request
03-10-99: G-P's 1st response to DEP's Completeness Request of 03-09-99
04-26-99: G-P's 2nd response to DEP's Completeness Request of 03-09-99.
04-26-99: Application complete
05-xx-99: Issue Intent

2. FACILITY INFORMATION

2.1 Facility Location

The Georgia-Pacific Corporation (G-P) Palatka pulp and paper mill facility is located North of County Road 216 and west of US 17, near Palatka, Putnam County. This site is approximately 110 kilometers from the Okeefenokee National Wilderness Refuge, a Class I PSD Area. The UTM coordinates of this facility are Zone 17; 434.0 km E; 3283.4 km N.

2.2 Standard Industrial Classification Codes (SIC)

Major Group No.	26	Paper and Allied Products
Industry Group No.	2611	Pulp Mills
Industry Group No.	2621	Paper Mills

2.3 Facility Category

The Kraft pulp mill, located in Palatka, Florida and operated by G-P, consists of a batch digester system, brown stock washer system, multiple effect evaporator (MEE) system, condensate stripper system, recovery boiler and smelt tanks, lime kiln, tall oil plant, bleach plant, steam boilers, and other equipment to produce finished paper products from virgin wood.

The facility is classified as a major or Title V source of air pollution because emissions of at least one regulated air pollutant exceed 100 TPY. This industry is included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one regulated air pollutant, the facility is classified as a major facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). Per Table 62-212.400-2, modifications at the facility resulting in emissions increases greater than the listed significance levels require review per the PSD rules and a determination of Best Available Control Technology (BACT) per Rule 62-212, F.A.C. For the proposed changes, greater than significant

increases will occur for CO. As such, this pollutant is subject to review under the PSD permitting program.

3. PROCESS DESCRIPTION

G-P is proposing to replace the existing two bleach plants (Nos. 1 and 2 Bleach Plants) with a single new elemental chlorine-free (ECF) bleach plant (No. 3 Bleach Plant). In the basic ECF pulp bleaching process, chlorine dioxide is substituted for chlorine and/or sodium hypochlorite to bleach the pulp. ECF pulp bleaching can be used to bleach either softwood or hardwood pulp. ECF bleach plants of the design G-P will be installing typically bleach the pulp in three stages. The three stages consist of a D_{100} stage (chlorine dioxide stage), an E_{OP} stage (caustic extraction with oxygen and peroxide), and a final D stage (chlorine dioxide stage), resulting in a D_{100} (E_{OP}) D sequence. Equipment includes bleaching towers, washers, filtrate tanks, pumps, etc. Pulp to the bleach plant is usually supplied from a high density chest or washed stock chest for either hardwood or softwood pulp. Air emissions generated from the ECF bleaching process include chlorine, carbon monoxide (CO), volatile organic compounds (VOC), and hazardous air pollutants (HAPs). Total reduced sulfur (TRS) emissions are also potentially generated. An add-on wet scrubber, typically installed on bleach plants, provides control of chlorinated HAPs and some control of VOCs and other HAPs, but does little to control CO emissions.

4. PROJECT DESCRIPTION

This permit addresses the following emissions units:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
036	Process	No. 3 Bleach Plant

The applicant proposes to replace the existing chlorine-based Nos. 1 and 2 Bleach Plants with a new ECF bleach plant (No. 3 Bleach Plant). The existing bleach plants use chlorine and sodium hypochlorite for bleaching, and these uses will be eliminated by the new bleach plant. The proposed modification will allow G-P to comply with the recently promulgated Maximum Achievable Control Technology (MACT) standards for the pulp and paper industry (commonly referred to as MACT I or the Cluster Rule) and the Best Available Technology (BAT) Effluent Guidelines. Since the proposed new bleach plant represents a major capital investment, G-P has made a business decision to install a bleach plant with a larger capacity than the existing bleach plants. This can be accomplished with a nominal increase in costs over and above the cost of simply replacing the existing bleach plant capacity. The proposed No. 3 Bleach Plant will be capable of bleaching up to 1,702 tons per day (TPD) of air-dried bleached pulp (ADBP) as a daily maximum, and 1,350 TPD ADBP as a maximum monthly average. The existing Nos. 1 and 2 Bleach Plants combined have a capacity of 1,152 TPD ADBP.

No other emissions unit at the facility will be affected by replacement of the existing bleach plants with the No. 3 Bleach Plant. No increase in total pulp production by the digester system at the facility will result from the proposed project.

The proposed project will result in an increase in CO and potentially an increase in TRS emissions, but a significant decrease in emissions of VOCs and HAPs. Potential emission increases of TRS are below the significant emission level for TRS per Table 62-212.400-2, F.A.C., and do not require PSD or non-attainment new source review. However, PSD review is required for CO since the increase in emissions, per the application, will increase by more than PSD significant levels.

Estimated emissions from the proposed project are shown below:

POLLUTANT	EXISTING EMISSIONS (Nos. 1 and 2 Bleach Plants)	PROPOSED EMISSIONS (No.3 Bleach Plant)	NET CHANGE IN EMISSIONS
CO	48.0 TPY	201.0 TPY	153.0 TPY
VOC	144.7 TPY	80.7 TPY	-64.0 TPY
TRS	1.2	9.0 TPY	7.8 TPY
HAPs	143.8	75.5 TPY	-68.3 TPY

5. RULE APPLICABILITY

The project is subject to the federal National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Pulp and Paper Facilities (40 CFR 63, Subpart S), incorporated by reference in Rule 62-204.800, F.A.C.

The proposed project is subject to permitting, preconstruction review, emissions limits and compliance requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).

This facility is located in Putnam County; an area designated as attainment for all criteria pollutants in accordance with Rule 62-204.360, F.A.C. The proposed project is subject to review under Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD), because the potential emission increases for CO exceeds the significant emission rate given in Chapter 62-212, Table 62-212.400-2, F.A.C. PSD review requires an assessment of air quality impacts and a determination of Best Available Control Technology (BACT).

The emission units affected by this permit modification shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein) and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments

Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods
Rule 62-297.520	EPA Continuous Monitor Performance Specifications
40 CFR 63, Subpart A	General Provisions for MACT Sources
40 CFR 63.445	Standards for Bleaching Systems
40 CFR 63.450	Standards for Enclosures and Closed-Vent Systems
40 CFR 63.453	Monitoring Requirements
40 CFR 63.454	Recordkeeping Requirements
40 CFR 63.455	Reporting Requirements
40 CFR 63.457	Test Methods and Procedures

6. SOURCE IMPACT ANALYSIS

6.1 Air Quality Analysis

6.1.1 Introduction

According to the application, the proposed project will increase emissions of carbon monoxide by more than PSD significant amounts. Carbon monoxide is a criteria pollutant and has national and state ambient air quality standards (AAQS) defined for it. There are no PSD increments for CO. The PSD regulations require the following air quality analyses for this project:

- A significant impact analysis for CO;
- An analysis of existing air quality for CO
- An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS (there is no PSD increment for CO). However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable

provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the required analyses follows.

6.1.2 Analysis of Existing Air Quality and Determination of Background Concentrations

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. The monitoring requirement may be satisfied by using existing representative monitoring data, if available. An exemption to the monitoring requirement may be obtained if the maximum air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific *de minimis* concentration. In addition, if EPA has not established an acceptable monitoring method for the specific pollutant, monitoring may not be required.

If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling.

The table below shows that predicted CO impacts from the project is predicted to be less than the monitoring *de minimis* level. Therefore, preconstruction ambient air quality monitoring is not required for this pollutant.

Maximum Project Air Quality Impacts for Comparison to the Monitoring de Minimis Levels.

Pollutant	Avg. Time	Max Predicted Impact (ug/m^3)	De Minimis Level (ug/m^3)	Impact Greater Than de Minimis?
CO	8-hour	182	575	No

6.1.3 Models and Meteorological Data Used in the Air Quality Impact Analysis

The applicant and the Department used the EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model to evaluate the pollutant emissions from the proposed project. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms, such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by

the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfy the good engineering practice (GEP) stack height criteria.

Meteorological data used in the ISCST3 model consisted of a consecutive 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) stations at Jacksonville International Airport, Florida (surface data) and Waycross, Georgia (upper air data). The 5-year period of meteorological data was from 1984 through 1988. These NWS stations were selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling.

Since five years of data were used in ISCST3, the highest-second-high (HSH) short-term predicted concentrations were compared with the appropriate AAQS. For determining the project's significant impact area in the vicinity of the facility and if there are significant impacts from the project on any PSD Class I area, the highest short-term predicted concentration were compared to the significant impact level.

6.1.4 Significant Impact Analysis

Initially, the applicant conducts modeling using only the proposed project's emissions changes. If this modeling shows significant impacts, further modeling is required to determine the project's impacts on the AAQS. The G-P facility is located in a PSD Class II area. A total of 236 receptors were used in the significant impact analysis. These receptors were placed along 36 polar radials spaced 10 degrees apart and centered on the existing TRS incinerator located at the facility. The innermost receptors along each radial were located on the plant property boundary. Additional receptors were located offsite along each radial at distances of 700, 1,100, 1,500, 2,000, 2,500, 3,000, 3,500, 4,000, and 5,000 meters from the modeling origin.

In addition, eleven discrete receptors were used to predict CO impacts at the two closest PSD Class I areas. Ten of the 11 receptors were located along the southern and eastern boundaries of the Okeefenokee National Wilderness Refuge (ONWR) located approximately 111 kilometers (km) north-northwest of the facility. One additional receptor was located at the Wolf Island National Wilderness Refuge (WINWR), located approximately 150 km north of the facility.

For each pollutant subject to PSD and also subject to AAQS analyses, this modeling compare maximum predicted impacts due to the project with significant impact levels to determine whether significant impacts due to the project are predicted in the vicinity of the facility. The tables below summarize the results of this modeling. The results of the significant impact modeling indicate that there are no significant impacts predicted from the increase in emissions from this project. Therefore, no further modeling to demonstrate compliance with the AAQS was required.

Maximum Project Air Quality Impacts for Comparison to the PSD Significant Impact Levels

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m^3)	Significant Impact Level (ug/m^3)	Significant Impact?
CO	8-hour	182	500	No
	1-hour	367	2,000	No

Because allowable PSD increments do not exist for CO, the Class I modeling analysis was performed only for the Air Quality Related Value (AQRV) assessment. The Class I modeling predicts very low CO impacts upon the Class I areas.

6.1.5 Compliance With AAQS and PSD Increments for Other Pollutants

Because a complete air quality impact analysis for the G-P Palatka facility has not been recently performed, the Department requested the applicant to perform a full AAQS and PSD Class II and Class I increment analysis for the facility for particulate matter (PM_{10}), sulfur dioxide (SO_2), and nitrogen oxides (NO_x). The requested analysis must be performed and submitted to the Department for approval prior to issuance of a final PSD permit for the No. 3 Bleach Plant.

6.2 Additional Impacts Analysis

6.2.1 Impact Analysis Impacts On Soils, Vegetation, And Wildlife

The maximum ground-level concentrations predicted to occur from CO emissions as a result of the proposed project are predicted to be insignificant. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area near the G-P facility. An AQRV analysis was performed by the applicant for the Class I area by identifying the AQRV's for the Class I areas, and assessing potential impacts due to the project.. Predicted CO impacts upon the Class I areas are very small, and no significant impacts on these areas are expected.

6.2.2 Impact On Visibility

A regional haze analysis is used to assess the potential for a significant increase in regional haze in the Class I areas due to this source's projected increase in emissions. Since the visibility criteria is not dependent upon CO emissions, the proposed project is predicted to have no adverse effects on visibility in the Class I area.

6.2.3 Growth-Related Air Quality Impacts

The proposed modification will not significantly change employment, population, housing or commercial/industrial development in the area to the extent that a significant air quality impact will result.

7. CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant, the Department has made a preliminary determination that the proposed project will comply with all applicable State of Florida and federal air pollution regulations, provided the Department's BACT determination is implemented.

Syed Arif, P.E.
Cleve Holladay, Meteorologist

DRAFT

PERMITTEE:

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

Authorized Representative:
Mr. David Spraley, V.P., Operations

FID No.	1070005
PSD No.	PSD-FL-264
SIC No.	2611
Project:	No. 3 Bleach Plant
Expires:	April 15, 2001

PROJECT AND LOCATION:

Permit for the construction of the elemental chlorine-free (ECF) No. 3 Bleach Plant at the Georgia-Pacific facility in Palatka. The new bleach plant will replace two existing bleach plants (Nos. 1 and 2 Bleach Plants). The project is being implemented to meet the MACT regulations for the Pulp and Paper industry. The project is located at CR 216 and US 17, Palatka, Putnam County. UTM coordinates are Zone 17; 434.0 km E; 3283.4 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Attached appendices are made a part of this permit:

Appendix BD	BACT Determination
Appendix GC	Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

DRAFT

SECTION I. FACILITY INFORMATION

FACILITY DESCRIPTION

Georgia-Pacific Corporation operates a Kraft pulp mill in Palatka, Putnam County, Florida. The facility produces both unbleached and bleached paper products. The company has applied for the construction of the No. 3 Bleach Plant to replace the existing Nos. 1 and 2 Bleach Plants. The No. 3 Bleach Plant will be an elemental chlorine-free (ECF) bleach plant. The two existing bleach plants currently use chlorine, sodium hypochlorite and chlorine dioxide for bleaching. The new plant will substitute chlorine dioxide for chlorine in the bleaching process. The sodium hypochlorite stage in the existing bleach plants will also be eliminated in the new plant.

The new bleach plant is being proposed in order to comply with the Maximum Achievable Control Technology (MACT) regulations for the pulp and paper industry (40 CFR 63, Subpart S) and the Best Achievable Technology (BAT) Effluent Guidelines. The final compliance date for the applicable part of these regulations is April 15, 2001. This permit will allow Georgia-Pacific to move forward to comply with the MACT regulations and the Effluent Guidelines to meet the compliance deadline.

As a result of the new bleach plant, increases in carbon monoxide (CO) and total reduced sulfur (TRS) emissions will occur. Emissions of volatile organic compounds (VOC) are expected to decrease. HAP emissions will be controlled to meet the requirements of 40 CFR 63 Subpart S.

REGULATORY CLASSIFICATION

The Georgia-Pacific facility is classified as a "Major or Title V Source" per Rule 62-210.200, F.A.C., because it has the potential to emit more than 100 tons per year of at least one regulated air pollutant.

This industry is included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one regulated pollutant, the facility is a major facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). Per Table 62-212.400-2, modifications at the facility resulting in emissions increases greater than the listed significance levels require review per the PSD rules and a determination of Best Available Control Technology (BACT) per Rule 62-212, F.A.C.

For the proposed changes, greater than significant increases will occur for CO. As such this pollutant is subject to review under the PSD permitting program.

PERMIT SCHEDULE:

02-09-99:	Date of Receipt of Application
03-09-99:	DEP Completeness Request
03-10-99:	G-P's 1st response to DEP's Completeness Request of 03-09-99
04-26-99:	G-P's 2nd response to DEP's Completeness Request of 03-09-99.
04-26-99:	Application complete

RELEVANT DOCUMENTS:

The documents listed form the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Date of Receipt of Application: 02-09-99
- DEP Completeness Request: 03-09-99
- G-P's 1st response to DEP's Completeness Request: 03-10-99
- G-P's 2nd response to DEP's Completeness Request: 04-26-99
- Application complete: 04-26-99
- Technical Evaluation and Preliminary Determination 05-xx-99
- Best Available Control Technology determination (issued concurrently with permit)

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SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

1. Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department's Northeast District Office, 7825 Baymeadows Way, Jacksonville, Florida 32256-7590. All applications for permits to construct or modify an emissions unit(s) *subject to the Prevention of Significant Deterioration or Nonattainment (NA) review requirements* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road (MS 5505), Tallahassee, Florida 32399-2400 (phone number 850/488-0114).

2. General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. **[Rule 62-4.160, F.A.C.]**

3. Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.

4. Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. **[Rule 62-210.900, F.A.C.]**

5. Expiration: This air construction permit **shall expire on April 15, 2001** **[Rule 62-210.300(1), F.A.C.].** The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the Department's Northeast District Office of any delays in completion of the project which would affect the startup day by more than 90 days. **[Rule 62-4.090, F.A.C]**

6. Application for Title V Permit: An application for a Title V operating permit, pursuant to Chapter 62-213, F.A.C., must be submitted to the Department's Northeast District Office **[Chapter 62-213, F.A.C.]**

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SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

The Specific Conditions listed in this section apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
036	No. 3 Bleach Plant

1. Unless otherwise indicated, the construction and operation of the above emission units shall be in accordance with the capacities and specifications stated in the application or in updated submittals. **[Rule 62-210.300, F.A.C.]**
2. The subject emissions unit shall comply with all applicable provisions of the 40 CFR 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart S. **[Rule 62-204.800 F.A.C.]**
3. The production rate of the No. 3 Bleach Plant shall not exceed 1,350 tons per day (TPD) of air-dried bleached pulp (ADBP) as a maximum monthly average, nor 1,702 TPD ADBP as a daily maximum. **[Rule 62-210.200, F.A.C.]**
4. The subject emission unit is allowed to operate continuously (8760 hours/year). **[Rule 62-210.200, F.A.C.]**
5. Carbon monoxide emissions from the No. 3 Bleach Plant shall be minimized to the extent practicable by efficient bleaching operations. Carbon monoxide emissions from the No. 3 Bleach Plant wet scrubber stack shall not exceed 46 pounds per hour and 201 tons per year. Initial and annual compliance tests will be conducted to demonstrate compliance with this emission limit. **[Rule 62-212.410, F.A.C.]**
6. Visible emissions from the No. 3 Bleach Plant wet scrubber stack shall not exceed 20% opacity. This visible emissions limit shall only be effective if the visible emission measurement can be made without being substantially affected by plume mixing or moisture condensation. **[Rules 62-296.320 and 62-296.404(2)(b), F.A.C.]**
7. The control device used to reduce emissions of total chlorinated hazardous air pollutants (HAPs) from the No. 3 Bleach Plant shall:
   (a) Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight;
   (b) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or
   (c) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of oven-dried pulp (ODP) **[40 CFR 63.445(c)(1)]**
8. Before this construction permit expires, the subject emissions unit shall be tested for compliance with the above control efficiency requirement for total chlorinated HAPs. For the

duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as at least 90 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

9. The Department's Northeast District office in Jacksonville shall be notified in writing at least 15 days prior to a compliance test. Written reports of the test results shall be submitted within 45 days of test completion. **[Rule 62-297.310, F.A.C.]**

10. The compliance test procedures shall be in accordance with EPA Reference Methods 1, 2, 3, 4, 9, 10 and 26A, as appropriate, as published in 40 CFR 60, Appendix A. 60, Appendix A. **[Rules 62-204.800 and 62-297.310(7)(c), F.A.C.]**

11. All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. **[Rule 62-4.070(3), F.A.C.]**

12. The permittee shall install, calibrate, maintain, and operate continuous monitoring devices which can be used to determine the pH or oxidation-reduction potential of the gas scrubber effluent, the gas scrubber vent gas inlet flow rate (or an option proposed by the permittee and approved by the Department prior to startup), and the gas scrubber liquid influent flow rate. The parametric monitoring values will be established during the initial compliance testing. **[40 CFR 63.453(c) and (d); 63.453(n)]**

13. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

14. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. **[Rule 62-210.650, F.A.C.]**

15. The permittee shall submit an Annual Operating Report using DEP Form 62-210.900(4) to the Department's Northeast District office by March 1 of the following year for the previous year's operation. **[Rule 62-210.370, F.A.C.]**

16. The subject emissions unit shall be subject to the following:

    - Excess emissions resulting from startup, shutdown or malfunction of any source shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. **[Rule 62-210.700, F.A.C.]**

- Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. **[Rule 62-210.700, F.A.C.]**
- Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest. **[Rule 62-210.700, F.A.C.]**
- In case of excess emissions resulting from malfunctions, each source shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
- Prior to April 15, 2001, the permittee shall submit a startup, shutdown and malfunction plan for the No. 3 Bleach Plant as required under 40 CFR 63.6(e)(3).

[40 CFR 63.6(e)(3) and Rule 62-210.700, F.A.C.]

17. In order to document continuing compliance with Specific Condition Nos. 3, 5, 7 and 12, daily records shall be maintained. The records at a minimum shall contain the following: **[Rule 62-4.070(3), F.A.C.]**

    - Quantity of pulp processed through the No. 3 Bleach Plant, in air-dried bleached tons.
    - Scrubber parameters monitored per Specific Condition 12.
    - Within 6 months of startup of the No. 3 Bleach Plant, the permittee shall submit an Operation and Maintenance (O&M) Plan which sets forth the practices which are employed to result in efficient bleaching operations.

18. In order to reduce chloroform air emissions from the No. 3 Bleach Plant, the permittee shall meet the applicable effluent limitation guidelines and standards specified in 40 CFR Part 430, and use no chlorine or hypochlorite for bleaching in the No. 3 Bleach Plant. **[40 CFR 63.445(d)]**

Georgia-Pacific Corporation
No. 3 Bleach Plant
PSD-FL-264 / 1070005-006-AC
Palatka, Putnam County

Georgia-Pacific Corporation (G-P) has applied to install a new elemental chlorine-free (ECF) bleach plant (No. 3 Bleach Plant) to replace two existing bleach plants at its Palatka facility in Putnam County. The proposed modification will allow G-P to comply with the recently promulgated Maximum Achievable Control Technology (MACT) standards for the pulp and paper industry (commonly referred to as MACT I or the Cluster Rule) and the Best Available Technology (BAT) for Effluent Guidelines. The proposed bleach plant consists of bleaching towers, washers, tanks, and associated equipment. The proposed No. 3 Bleach Plant will be capable of bleaching up to 1,702 tons per day (TPD) of air-dried bleached pulp (ADBP) as a daily maximum and 1,350 TPD ADBP as a maximum monthly average.

The proposed project will result in an increase in carbon monoxide (CO) emissions and potential increases in total reduced sulfur (TRS) emissions, but a decrease in emissions of volatile organic compounds (VOCs) and emissions of hazardous air pollutants (HAPs). Emissions increases of TRS are below the significant emission level for TRS per Table 62-212.400-2, F.A.C. Therefore, PSD review is not required for this class of pollutants. However, PSD review is required for CO since the increase in emissions, per the application, is more than the PSD significance level.

The project is subject to Prevention of Significant Deterioration (PSD) review for CO in accordance with Rule 62-212.400, Florida Administrative Code (F.A.C.). A Best Available Control Technology (BACT) determination is part of the review required by Rules 62-212.400 and 62-296, F.A.C. Air pollution control equipment will consist of efficient operation to minimize CO emissions from the No. 3 Bleach Plant.

PROCESS EMISSIONS

The applicant proposes the following emissions:

POLLUTANT	EXISTING EMISSIONS (Nos. 1 and 2 Bleach Plants)	PROPOSED EMISSIONS (No.3 Bleach Plant)	NET CHANGE IN EMISSIONS
CO	48.0 TPY	201.0 TPY	153.0 TPY
VOC	144.7 TPY	80.7 TPY	-64.0 TPY
TRS	1.2	9.0 TPY	7.8 TPY
HAPs	143.8	75.5 TPY	-68.3 TPY

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

DATE OF RECEIPT OF COMPLETE BACT APPLICATION:

April 26, 1999

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212.400, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case-by-case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.

- All scientific, engineering, and technical material and other information available to the Department.

- The emission limiting standards or BACT determination of any other state.

- The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically infeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

BACT EMISSION LIMITS PROPOSED BY APPLICANT:

POLLUTANT	EMISSION LIMIT	LIMIT BASIS	CONTROL TECHNOLOGY
CO	Efficient bleaching operations	No actual test data; only other BACT determination for bleach plants	Efficient bleaching operations

BACT ANALYSIS

CARBON MONOXIDE (CO)

CO is a byproduct that is formed from the bleaching of Kraft pulp. CO is formed in the chlorine, caustic extraction, and chlorine dioxide bleaching sequences of the bleaching process. Until recently, it was not known how much CO formation could be expected from bleaching using up to 100% ClO_2 substitution (NCASI TB 760, 1998). Based on studies performed by NCASI, it has been postulated that CO formation from ClO_2 substitution occurs as a result of the synergistic reaction between ClO_2 and the lignin in the pulp. The results of the studies do not show a correlation between CO formation and percent ClO_2 substitution. However, when using 100% ClO_2 substitution, CO emissions appear to increase linearly with the total percent ClO_2 applied on the pulp. Therefore, it would appear that when bleaching using an ECF bleaching process (*i.e.*, 100% ClO_2 substitution), reducing the amount of ClO_2 applied to the pulp could reduce CO formation. This would suggest that CO emissions from the ECF bleaching process could be "controlled" by maintaining the percentage of ClO_2 applied to the pulp at minimum levels that would ensure proper bleaching of the pulp. Thus, ensuring efficient use of ClO_2 and efficient operation of the bleaching process will minimize CO emissions.

EPA's BACT Clearinghouse database shows only one BACT determination for CO emissions from a bleach plant. The determination was made by the Mississippi Department of Environmental Quality in September 1996 for Weyerhaeuser's Kraft bleach plant in Columbus (Permit No. 1680-00044, September 10, 1996). The final BACT determination was to control CO emissions by ensuring efficient operations of the bleach plant.

At the Department's request, G-P addressed additional control techniques for the reduction of bleach plant CO emissions. Specifically, G-P performed a feasibility and cost analysis for catalytic oxidation and thermal oxidation of CO.

Regenerative Catalytic Oxidation

Catalytic oxidation involves the use of a catalyst that reacts with pollutants in the gas stream and reduces them to compounds such as carbon dioxide and water. In order to render catalytic oxidation more effective, thermal oxidation using direct flame burners is often implemented in conjunction with catalytic methods. This also allows oxidation to occur at lower temperatures than thermal oxidation methods alone. This combination of control techniques is called a regenerative catalytic oxidizer (RCO). A cost analysis for an RCO that could be installed on the proposed No. 3 Bleach Plant wet scrubber was performed. The total estimated capital investment cost for a CO destruction efficiency of 95% is approximately $1.6 million. The total annual cost is $808,000/yr. Based on reduction of 191 TPY (201 TPY x 0.95 = 191 TPY) of CO, the total cost effectiveness is $4,200 per ton of CO removed. It is noted that this cost may be low due to the fact that this technology has not previously been applied to a bleach plant at any other paper mill in the

United States. Therefore, actual costs associated with installation and operation may be higher than estimated. The total cost effectiveness, exceeding $4,200 per ton of CO removed, is considered as economically infeasible for control of CO in this case.

In addition, since this technology has not been applied to bleach plants at other facilities, the feasibility for application of this technology is uncertain. Compounds that may be in the gas stream include TRS compounds that are not only corrosive, but can cause deposits to form on the equipment, in turn clogging and fouling the catalyst.

Thermal Oxidation

A thermal oxidizer is a technically feasible, although unproven, option for reducing CO emissions from bleach plant wet scrubber vent streams. The EPA background information document (BID) for the proposed Pulp and Paper Cluster Rule (EPA-453/R-93-050a; 1993) establishes that thermal oxidation is technically feasible and so an economic analysis was performed. The total annualized cost for the thermal oxidizer is estimated at $1,500,000/yr. For a CO destruction of 191 TPY, the cost effectiveness is $7,850 per ton of CO removed. Therefore, the thermal oxidizer option is considered to be economically infeasible. The EPA, in determining MACT standards for bleach plants, dismissed thermal oxidation on the basis of economic impacts as well.

Conclusion

Given the fact that RCO and thermal oxidation are not proven technically on bleach plants and the relatively high cost per ton of CO removed, the use of add-on control equipment to control CO emissions from the proposed bleach plant is considered economically infeasible. The Department considers the best method to control CO emissions are through the use of best operational practices. This was the control method recommended for the only other bleach plant PSD/BACT evaluation listed in the EPA's BACT/LAER Clearinghouse database.

BACT DETERMINATION BY THE DEPARTMENT:

CARBON MONOXIDE (CO)

Based on the information provided by the applicant and other information available to the Department, BACT is "efficient bleaching operations" as a work practice to minimize CO emissions from the proposed No. 3 Bleach Plant. The following emission limits are established for the No. 3 Bleach Plant:

POLLUTANT	EMISSION LIMIT	LIMIT BASIS	CONTROL TECHNOLOGY
CO	46 lb/hr and 201 TPY	Per application	Efficient bleaching operations

COMPLIANCE

Compliance with the work practice standard shall be demonstrated by submission and Department approval of an Operation and Maintenance (O&M) Plan for the No. 3 Bleach Plant. The O&M Plan shall set forth the practices G-P will employ to result in efficient bleaching operations. An initial and annual stack test of the No. 3 Bleach Plant wet scrubber stack for CO emissions shall be conducted in accordance with the EPA Reference Method 10 as contained in 40 CFR 60, Appendix A.

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Syed Arif, P.E., Permit Engineer
Department of Environmental Protection
Bureau of Air Regulation - MS 5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Date:

Approved By:

Howard L. Rhodes, Director
Division of Air Resources Management

Date:

G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

(a) Have access to and copy and records that must be kept under the conditions of the permit;
(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of non-compliance; and
(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology *(X)*
(b) Determination of Prevention of Significant Deterioration *(X)*; and
(c) Compliance with New Source Performance Standards *(X)*.

G.14 The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used; and
6. The results of such analyses.

G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Memorandum

Florida Department of
Environmental Protection

TO: Clair Fancy

FROM: Syed Arif

DATE: May 11, 1999

SUBJECT: Georgia-Pacific Palatka Mill
PSD-FL-264 New Bleach Plant

Attached is the Public Notice and draft permit modification to install a new elemental chlorine-free bleach plant along with associated equipment. It will replace two existing bleach plants. The project is being implemented to comply with the MACT regulations for the pulp and paper industry. The modification will allow the facility to meet the compliance deadlines as outlined in the MACT regulations.

A Best Available Control Technology determination was required for carbon monoxide pursuant to Rule 62-212.400, F.A.C. CO emissions will be controlled through good combustion practices.

I recommend your approval and signature.

SA/a

Attachments

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

P.E. Certification Statement

Permittee:
Georgia-Pacific Corporation
Palatka Mill

DEP File No. 1070005-006-AC
Permit No. PSD-FL-264

Project type: Air Construction Permit for a new elemental chlorine-free bleach plant with associated equipment. The project is being implemented to meet the MACT regulations for the pulp and paper industry (40 CFR 63, Subpart S). CO emissions will be minimized by good combustion practises.

I HEREBY CERTIFY *that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).*

Syed Arif, P.E. — 5/11/99
Registration Number: 51861 — Date

Department of Environmental Protection
Bureau of Air Regulation
New Source Review Section
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