



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 09 2002

4APT-APB

Mr. A. A. Linero, P.E.
Florida Department of Environmental Protection
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

OCT 15 2002

BUREAU OF AIR REGULATION

Dear Mr. Linero:

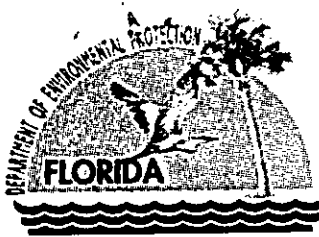
Thank you for your letter dated July 10, 2002, regarding averaging periods for the measurements made by the continuous oxygen monitor on the No. 7 Power Boiler at the Jefferson Smurfit kraft pulp mill in Fernandina Beach, Florida. Oxygen measurements are needed in part to assess compliance with the nitrogen oxides (NO_x) emissions limit. Jefferson Smurfit has proposed a 3-hour averaging period. Since the compliance test method specified in the permit for NO_x emissions is Method 7, a 3-hour averaging period for oxygen measurements seems reasonable to us because it is consistent with the averaging period resulting from use of Method 7. However, the Florida Department of Environmental Protection is certainly at liberty to choose a shorter averaging period if you prefer.

If you have any questions regarding this letter, please call Jim Little at (404) 562-9118.

Sincerely,

A handwritten signature in cursive that reads "James W. Little, for".

Jeaneanne M. Gettle
Acting Chief
Air Permits Section



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

July 10, 2002

Mr. Gregg Worley, Chief
Air Planning Branch
U.S. EPA – Region IV
61 Forsyth Street
Atlanta, Georgia 30303

Re: Jefferson Smurfit Corporation – Fernandina Beach Mill
No. 7 Power Boiler Oxygen Set Point
0890003-007-AC, PSD-FL-062A

Dear Mr. Worley:

Enclosed for your review and comment is a letter submitted by Golder Associates Inc. on behalf of Jefferson Smurfit Corporation (JSC). JSC is requesting a clarification of the requirement for the No. 7 Power Boiler to continuously monitor oxygen set points. EPA Region IV issued a federal PSD permit on April 13, 1981 (PSD-FL-062), which required oxygen monitoring in lieu of NO_x and CO continuous monitoring.

A document entitled "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" was a part of the BACT Determination. The document required compliance with oxygen levels within a certain range based on the initial stack testing but no averaging times were included to constitute noncompliance with this requirement.

Since EPA wrote the original BACT that included the specific condition requiring the use of a flue gas oxygen meter, the Department is requesting guidance from EPA on this request by JSC. The complete application for this project is enclosed with this letter. We would appreciate your early review and determination. Your comments should be forwarded to my attention at the letterhead address or faxed to me at (850) 922-6979. If you have any questions, please contact Syed Arif at (850) 921-9528.

Sincerely,

A. A. Linero, P.E., Administrator
New Source Review Section

AAL/sa
Enclosures

cc: S. Arif, P.E., BAR
C. Kirts, P.E., NED
D. Buff, P.E., Golder Associates Inc.

"More Protection, Less Process"

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603



RECEIVED

June 4, 2002

JUN 10 2002

0137599

Florida Department of Environmental Protection
2600 Blair Stone Road
MS 5505
Tallahassee, Florida 32399-2400

BUREAU OF AIR REGULATION

Attention: Mr. Clair Fancy, P.E., Bureau Chief, New Source Review Section

SUBJECT: JEFFERSON SMURFIT CORPORATION
FERNANDINA BEACH MILL
FACILITY ID 0890003
NO. 7 POWER BOILER OXYGEN SET POINT

Dear Mr. Fancy:

Jefferson Smurfit Corporation (JSC) currently operates the Fernandina Beach kraft pulp mill under Title V operating permit No. 0890003-001-AV. The No. 7 Power Boiler (EU ID 015) operates at the mill to provide process steam to the mill. The purpose of this letter is to request a clarification to the requirement for the No. 7 Power Boiler to continuously monitor oxygen set points.

The No. 7 Power Boiler was originally permitted by Florida DER on March 10, 1981, under construction permit No. AC45-35532. A federal PSD permit was issued by EPA Region IV on April 13, 1981 (PSD-FL-062). The pollutants SO₂, PM, NO_x, CO, and VOC were subject to a BACT determination, and emission limits were set for each of these pollutants except VOC.

The PSD permit required O₂ monitoring in lieu of NO_x and CO continuous monitoring. Appropriate set points for O₂ were to be set based on the document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls". This document required initial stack testing to establish the low and high points for O₂. The document further states "The flue gas oxygen content shall be maintained between these two points and alarms shall be set to sound when flue gas oxygen levels exceed either side of this range. Any operation outside of this range will constitute noncompliance with this specific condition,....".

Subsequently, compliance testing was performed and the oxygen set points were established at 2.7% (min) and 7.7% (max). These limits were incorporated into the subsequent operating permits for No. 7 Power Boiler, and are contained in the current Title V operating permit for the facility (Permit No. 0890003-001-AV). However, no averaging times are associated with these limits.

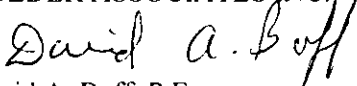
Because no averaging times are associated with the O₂ set points, any instantaneous O₂ reading below or above the set points could be interpreted as a violation of the permit. However, the NO_x emissions limit under Subpart D for an affected facility having an NO_x continuous monitor is based on a 3-hour averaging period [(40 CFR 60.45(g)(3)]. JSC believes the intent of the permit, even though based on BACT, is for the O₂ limits to be consistent with the Subpart D averaging time for NO_x, since the purpose of the O₂ monitoring is to demonstrate compliance with the NO_x limit.

JSC therefore wishes to clarify the averaging time in the PSD permit by modifying PSD-FL-062 to reflect a 3-hour averaging time for the O₂ set points. This change then can be incorporated into the Title V permit. The original EPA PSD permit is attached for your reference.

Attached are the first 6 pages of the Title V application form. Please contact David Buff (352) 336-5699, or Bill Crews, (902) 277-7746, if you need additional information or have any questions regarding this request.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, P.E.
Principal Engineer
Florida P.E. # 19011

DB/SLW/BJP

Enclosures: First 6 pages of application form
EPA PSD Permit PSD-FL-062

cc: Bill Crews, JSC
Christopher Kirts, P.E., DEP Northeast District

P:\Projects\2001\0137599 Jefferson Smurfit\44.1\VL060402.doc



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

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

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Jefferson Smurfit Corporation (U.S.)			
2. Site Name: Fernandina Mill			
3. Facility Identification Number:		0890003	<input type="checkbox"/> Unknown
4. Facility Location: Street Address or Other Locator: North 8th Street City: Fernandina Beach County: Nassau Zip Code: 32034			
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6. Existing Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Application Contact

1. Name and Title of Application Contact: Bill Crews, Environmental Manager			
2. Application Contact Mailing Address: Organization/Firm: Jefferson Smurfit Corp. (U.S.) Street Address: North 8th Street City: Fernandina Beach State: FL Zip Code: 32034			
3. Application Contact Telephone Numbers: Telephone: (904) 277-7746 Fax: (904) 277-5888			

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	<i>4/10/2002</i>
2. Permit Number:	<i>0890003-007-AC</i>
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

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

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

Current construction permit number: _____

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

Current construction permit number: _____

Operation permit number to be revised: _____

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

Operation permit number to be revised/corrected: _____

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

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

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

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

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Warren S. Flenniken, V.P. and General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Jefferson Smurfit Corp. (U.S.), Mill Div. Street Address: North 8th Street City: Fernandina Beach State: FL Zip Code: 32034
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (904) 261 - 5551 Fax: (904) 277 - 5888
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i> Signature <u><i>W.S. Flenniken</i></u> Date <u>06/06/02</u>

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address: Organization/Firm: Golder Associates Inc. Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653-1500
3. Professional Engineer Telephone Numbers: Telephone: (352) 336 - 5600 Fax: (352) 336 - 6603

4. Professional Engineer Statement:

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

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

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

If the purpose of this application is to obtain a Title V source air operation permit (check here [], 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.

Daniel A. Buff

Signature

6/4/2002

Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
015	No. 7 Power Boiler	ACM2	

Application Processing Fee

Check one: [] Attached - Amount: \$: _____ [] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The purpose of this application is to clarify the averaging time in the PSD permit by modifying PSD-FL-062 to reflect a 3-hour averaging time for the O₂ set points.

2. Projected or Actual Date of Commencement of Construction

3. Projected Date of Completion of Construction:

Application Comment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

APR 13 1981

REF: 4AH-AF

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. W. Galphin, General Manager
Container Corporation of America
North Eighth Street
Fernandina Beach, Florida 32034

Re: Proposed Modification to Kraft
Paper Mill, PSD-FL-062

Dear Mr. Galphin:

Review of your April 25, 1980 application to modify your existing kraft paper mill located in the northwest sector of Fernandina Beach, Nassau County, Florida, has been completed. The modification is subject to rules for the Prevention of Significant Air Quality Deterioration (PSD) contained in 40 CFR §52.21.

We have determined that the modification, as described in the application, meets all applicable requirements of the PSD regulations, subject to the conditions in the Conclusions section to the Final Determination (enclosed). EPA performed the preliminary determination concerning the proposed modification, and published a request for public comment on March 6, 1981. One comment was received. Our response to the comment has been attached to the Final Determination. Authority to Construct a Stationary Source is hereby issued for the facility described above, subject to the conditions in the Conclusions section to the Final Determination. This Authority to Construct is based solely on the requirements of 40 CFR §52.21, the Federal regulations governing significant deterioration of air quality. It does not apply to NPDES or other permits issued by this agency or permits issued by other agencies. Information regarding EPA permitting requirements can be provided if you contact Mr. Joe Franzmathes, Director, Office of Program Integration and Operations, at 404/881-3476. Additionally, construction covered by this Authority to Construct must be initiated within 18 months from the date of this letter.

Please be advised that a violation of any condition issued as part of this approval, as well as any construction which proceeds in material variance with information submitted in your application, will be subject to enforcement action.

GORDON ASSOCIATES INC.

APR 23 1981

GAINESVILLE

RECEIVED

APR 15 1981

FERNANDINA MILL

Authority to Construct will take effect on the date of this letter. The complete analysis which justifies this approval has been fully documented for future reference, if necessary. Any questions concerning this approval may be directed to Dr. Kent Williams, Chief, New Source Review Section, 404/881-4552.

Sincerely yours,



Thomas W. Devine
Director
Air and Hazardous Materials Division

Enclosure

cc: FL DER

Final Determination
Container Corporation of America
PSD-FL-062

I. Applicant

Container Corporation of America
North Eighth Street
Fernandina Beach, Florida 32034

II. Location

The proposed modification is located in the northwest sector of Fernandina Beach, Nassau County, Florida. This is on Amelia Island, approximately 40 kilometers northeast of Jacksonville, Florida. The UTM coordinators are: Zone 17, 456.2 km east and 3394.2 km north.

III. Project Description

The applicant proposes to modify its existing kraft paper mill by increasing steam generation capacity and changing fuel usage. Dependence on fuel oil is to be reduced by adding the capability to burn off coal and by the increased use of wood waste. The applicant proposes to construct the following new units:

- ° A coal/wood waste boiler (#7);
- ° Coal preparation and materials handling facilities to supply fuel to the new boiler; and
- ° Ash handling disposal facilities for the new boiler.

The modification will also include complete shutdown of the following facilities:

- ° No. 6 power boiler; and
- ° No. 3 recovery boiler and its associated smelt tank.

Power boiler No. 3 will be placed on "cold" standby. It will not be used except where one or more of the larger boilers is out of service.

Equipment capacity data for affected emissions units are summarized in Table 1.

IV. Source Impact Analysis

The existing kraft pulp and paper mill has the potential to emit greater than 100 tons per year of particulate matter (PM), sulfur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC) and carbon monoxide (CO). The existing source, therefore, is a major stationary source. The proposed modification significantly increases emissions of pollutants regulated under the Clean Air Act (Act) as amended August 7, 1977 (see Table 2). Thus, in accordance with Title 40, Code of Federal Regulations, Part 52.21 (40 CFR 52.21) as promulgated August 7, 1980 (45FR52676), the proposed project is a major modification and is subject to PSD review.

PSD review applies to each pollutant for which the modification would result in a significant net emissions increase. Table 2 summarizes emission changes of all pollutants regulated under the Act affected by the proposed modification. The table shows the proposed net emissions increases of PM, SO₂, NO_x, VOC, and CO are significant as defined in the PSD regulations 40 CFR 52.21(b)(23), and therefore are subject to PSD review.

The PSD review analyzes the following:

- A. Best Available Control Technology (BACT);
- B. PSD Increment Impacts;
- C. Class I Area Impacts;
- D. National Ambient Air Quality Standards (NAAQS) Impacts;
- E. Growth Impacts; and
- F. Soils, Vegetation, and Visibility Impacts.

A. Best Available Control Technology

The applicant has submitted an application which has been determined to be complete before August 7, 1980. This application showed the modification was subject to 40 CFR 52.21 as in effect on June 19, 1978. Therefore, in accordance with 40 CFR 52.21(i)(9), the requirements for BACT specified in the 1980 PSD regulations, 40 CFR 52.21(j), shall not apply. Instead the requirements in accordance with 40 CFR 52.21(j) as in effect on June 19, 1978 shall be applied. The latter does not require a BACT review for facilities emitting VOC, because the increase of uncontrolled VOC emissions is less than 100 tons per year.

Any new or modified facility which increases emissions of SO_2 , PM, NO_x , or CO must apply BACT. BACT is defined as the maximum degree of reduction achievable determined by a case-by-case review, taking into account energy, environmental, and economic impacts. The applicant has proposed BACT for each applicable case and has presented justification for the choice proposed. The justification is based upon the criteria listed above. BACT determinations are required to be at least as stringent as applicable NSPS limitations or requirements of the State Implementation Plan (SIP). Table 3 shows a summary of emissions limits and basis of requirements.

The applicant submitted a BACT analysis for the control of PM from the proposed No. 7 power boiler. The preferred candidate technology is:

- Multiclone dust collectors with reinjection of large wood char particles into the furnace, followed by
- an electrostatic precipitator.

The three alternative particulate control technologies also analyzed were:

- Wet scrubbers;
- Dry scrubbers; and
- Fabric filters.

The applicant's analysis was based upon many economic, energy, and environmental considerations. Pertinent to the EPA review of this analysis was that only the fabric filter alternative offered a potential environmental advantage over the ESP. The selection of the ESP over the fabric filters was based upon the potential fire hazard using wood fuel and the maintenance of filter bags considering the abrasive nature of wood ash. The applicant's analysis predicts the ESP emissions will be less than 50 percent of the NSPS standard of 0.1 pounds of PM per million Btu heat input. This is based upon the vendor's guarantee assuming a worst case ash content of 11 percent in coal and 3.75 percent in wood. Although actual PM emissions are expected to remain below the worst case calculated value of 0.049 pound per million BTU heat input (1b/MMBtu) the applicant proposes the NSPS limit of 0.1 lb/MMBtu

be established as BACT, because ESP performance is known to be reduced somewhat over the lifetime of equipment, and further, a design allowance must be made for continued temporary operation with a fraction of the 10 fields out of service.

EPA concurs that the proposed ESP equipment does constitute BACT for this case and that the NSPS standard of 0.1 lb/MMBtu will be achieved with this proposed technology.

The applicant has proposed that BACT for SO₂ emissions be represented by the NSPS standard of 1.2 pounds SO₂ per million Btu heat input. The applicant proposes to achieve this by burning low sulfur content (less than .75% S) Eastern or Mid Western bituminous coal.

The applicant has submitted alternate BACT candidates for SO₂ control; these are:

- Compliance (low sulfur) coal from other coal ranks;
- Coal cleaning prior to combustion; and
- Flue gas desulfurization (FGD).

The applicant's BACT review concluded that low sulfur bituminous coal would achieve the NSPS standard with the lowest economic impact and least technological uncertainty. EPA reviewed this analysis and questioned the availability of low sulfur coal over the lifetime of the proposed project. The applicant proposed to include in the equipment design necessary allowances to enable addition of FGD at any future date if and when a poor availability of low sulfur coal interfered with meeting the allowable emission standard of 1.2 lbs SO₂/MMBtu. With this condition, EPA concurs that the proposed use of less than .75 percent sulfur Eastern or Mid Western bituminous coal to achieve the NSPS emission limit does constitute BACT.

The applicant submitted a BACT analysis of PM control from fugitive and point sources associated with the coal preparation and handling. It is proposed to use surfactant sprays to minimize dust generation and enclosures for

critical operations. The applicant has considered some alternative additional controls, but rejected these because of economic impacts without material improvement of environmental impacts. EPA has reviewed the applicants proposal and concurs that it constitutes BACT for this case with the one additional requirement that the opacity limitation (less than 20%) required by NSPS 40 CFR 60 Subpart Y is applicable and shall be met.

The applicant proposed to control PM emissions from the ash handling system with a ventilation system controlled by fabric bag filters. It is proposed that PM emissions will be no greater than 0.5 pounds per hour from this system. EPA concurs that this technology and emission limit does constitute BACT for this case; however, it further determines that the opacity shall be no greater than 5 percent.

The applicant has submitted a BACT analysis for control of NO_x , VOC, and CO. He proposes to balance these emissions by controlling excess air and the ratio of overfire to underfire air rates. At the worst case conditions for NO_x control (100 percent coal fuel) the applicant proposes a limit of 0.6 lbs NO_x /MMBtu heat input. This corresponds to the NO_x limit established under the Florida State Implementation Plan BACT determination and is less than the NSPS requirements under 40 CFR 60 Subpart D. EPA has reviewed this proposed BACT and concurs it constitutes BACT for this case with the additional requirement that performance tests shall be run in accordance with the attached provisions "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls." Thus, the BACT limit of 0.6 lb NO_x /MMBtu heat input from coal shall be an upper boundary with optimization of combustion conditions (i.e. excess air, and ratio of primary combustion air/overfire air) to minimize NO_x emissions with due consideration given to combustion efficiency and CO emissions.

Table 3 summarizes the allowable emission limits of all applicable pollutants and source facilities.

B. PSD Increment Impacts

Paragraph (k)(2) of the PSD regulations requires an analysis to ensure that no PSD increment will be violated. The applicable Class II area PSD increments are shown in Table 4. Class I area PSD increments are discussed in Section IV C below.

The applicant submitted an analysis to show the maximum impacts the proposed modification will have upon these increments. The analysis utilized the EPA approved Industrial Source Complex Model (ISC) to determine the maximum change in ambient air concentration projected for PM and SO₂. The data input to these model runs consisted of:

- Five years of surface meteorological data (1970-1974) collected at the Jacksonville Airport, and upper air data for the same time period measured over Waycross, Georgia;
- Maximum allowable emissions for the proposed new facilities;
- Creditable emissions increases from other Container Corporation increment consuming facilities; these are:
 - No. 5 recovery boiler and smelt tank (for construction under PSD-FL-002 issued 12/10/76); and
 - an increase in fuel oil sulfur content allowed under the Florida SIP on two existing power boilers (No. 4 and No. 5).
- Creditable emissions decreases which are part of this proposed project; these are:
 - Shut down of No. 6 power boiler;
 - Shut down of No. 3 recovery boiler and its associated smelt tank; and
 - Placing No. 3 power boiler on cold stand-by.

Other facility changes within 50 kilometers were reviewed to determine if interactions would occur in PSD increment impacts. Jacksonville Electric Authority (PSD-FL-010) was not included in this analysis because the Container Corporation application was determined to be complete one month prior to that of the Jacksonville Electric Authority. The area of impact does not extend to the site of a new boiler constructed by the Anheuser-Busch Company. No other increment consuming facilities were in the vicinity. Consistent with EPA policy for applications received prior to August 7, 1980 the impact of fugitive emissions associated with this project were not analyzed for increment impact. The modeled net changes to the ambient air concentrations due to the proposed project and all other emission changes are also shown in Table 4 and compared with the allowable PSD Class II area increments. EPA has reviewed the applicant's analysis and concurs that no PSD Class II area increments are threatened.

C. Class I Area Impacts

Two Class I areas are near the proposed modification. The Ukefenokee Wildlife Wilderness Sanctuary and the Wolf Island National Wildlife Refuge and Wilderness Area are located approximately 64 kilometers west and 74 kilometers north of the mill, respectively.

The applicant analyzed the impact of the proposed modification upon these two Class I areas by including receptors on the Class I area boundaries in the increment analysis modeling runs. The maximum impact due to the net emission change for each Class I area and each averaging time is shown in Table 5. Also shown in Table 5 are the allowable Class I area increments. EPA concurs with the applicant's conclusion that no Class I area increment shall be threatened by the proposed modification, and further has determined that the air quality changes modeled for these two areas are so small as to constitute no affect.

D. NAAQS Impacts

Paragraph (k)(1) of the PSD regulations requires an analysis to ensure that no NAAQS will be violated. The applicable ambient standards are shown in Table 6.

The applicant submitted an analysis to show the maximum impacts the proposed modification will have upon these standards. This analysis considered:

- Monitored ambient air data measured by the Florida Department of Environmental Regulation at four monitoring sites within 3 kilometers of the Container Corporation (CAA) plant during 1977-1979;
- emissions of existing facilities at CCA, and of two nearby paper mills (ITT Rayonier and Gilman Paper Company) at allowable rates prior to 1979;
- emissions increases of existing facilities at CCA allowed since 1979; and
- emission increases and decreases associated with the proposed project.

The results of the applicant's analysis for PM, SO₂, and NO_x projected ambient maximum concentrations for the various averaging times. These maximum ambient concentrations calculated by the applicant's analysis are also shown in Table 6. By comparing these with the applicable NAAQS the applicant has concluded no threat to the standards will occur.

EPA has further noted that:

- Since the PM concentration changes of the net emissions change from the modification (see PSD Increment Analysis, Section IV B above) are not significant, no refined analysis of PM impact upon the PM standards is required; and
- The summation of the maximum monitored SO₂ concentrations (not corrected for existing facility impacts) and the maximum modeled SO₂ concentrations from all existing and new proposed facilities are less than the applicable NAAQS. These are also shown in Table 6.

On the basis of a review of the applicant's analysis of NAAQS impacts and the further worst case evidence EPA concurs with the applicant's conclusion that no NAAQS will be threatened by the proposed project.

E. Growth Impacts

The proposed project will not require additional employment nor will product production be increased; therefore, no local commercial or industrial growth will occur. The changes in incoming fuel transportation will be minimal and handled with existing facilities with a negligible change in secondary emissions.

F. Soils, Vegetation, and Visibility Impacts

The applicant analyzed impacts upon soils, vegetation and visibility due to the proposed project. The analysis includes a discussion of the susceptibility of the commercial crops (tobacco and corn) and the trees typical of the area (oaks and red maple) and concludes these range from intermediate sensitivity downward to resistant to SO₂. No vegetation showing extreme sensitivity is known in this area. The applicant concluded the impacts would be negligible. EPA has reviewed this analysis and concurs with the applicant's conclusion on the basis of the applicant's analysis and also because the impacts do not threaten secondary NAAQS standards which have been established considering these welfare related criteria.

V. Conclusions

EPA Region IV proposes a preliminary determination of approval with conditions for the construction of the modification to the Container Corporation of America's Fernandina Beach Paper Mill proposed in its application submitted April 25, 1980. The determination is made on the basis of information contained in the application and in additional information dated May 28, June 4, and November 12, 1980 received from the applicant. The specific conditions set forth in the permit are as follows:

1. The new facilities shall be constructed in accordance with the capacities and specifications stated in the application and summarized in Table 1. Specifically, at least 30 days prior to the beginning of construction, the permittee shall submit plans with sufficient details to adequately ensure available plant space for subsequent installation of a flue gas desulfurization unit if the availability of low sulfur coal threatens continued compliance with Condition 4 (below).

2. Visible emissions from all fugitive or point sources within the coal preparation and handling system shall not exhibit 20 percent opacity or greater in accordance with the NSPS for coal preparation plants (40 CFR 60 Subpart Y).
3. Particulate matter emissions from the ash handling facility shall not exceed 0.5 pounds per hour and opacity shall not exceed 5 percent while operating at maximum operating rate.
4. Emissions of PM, SO₂, and NO_x from the new No. 7 power boiler shall not exceed the mass rate shown in Table 7 while operating at the maximum operating rates shown for each fuel type. At lesser operating rates the emissions shall not exceed the specified emissions limits per unit heat input.
5. Visible emissions from the No. 7 power boiler shall not exhibit greater than 20 percent opacity except for one 6-minute period per hour of not more than 27 percent opacity (NSPS 40 CFR 60 Subpart D).
6. The applicant shall optimize combustion conditions to minimize NO_x formation in accordance with the attached provisions, "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls."
7. The applicant shall install, calibrate, maintain, and operate continuous monitoring systems for measuring opacity, SO₂ emissions, NO_x emissions, either oxygen or carbon dioxide (CO₂), and fuel input rates of coal and wood waste on No. 7 power boiler in accordance with the provisions of 40 CFR 60 Subpart D paragraph 60.45. The applicant shall also comply with all other applicable requirements of 40 CFR 60 Subpart D (NSPS).
8. Compliance with the emission limits (Conditions 2-6) shall be determined by performance tests scheduled in accordance with the attached General Conditions. Performance testing for the mass emissions rate from the fly ash handling system is not required providing compliance with the opacity standard is demonstrated and maintained. The performance tests

shall be conducted in accordance with the provisions of reference methods in Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8(b), as follows:

- a. Method 1 for sample and velocity traverses;
- b. Method 3 for gas analysis;
- c. Method 5 for concentration of PM and associated moisture content;
- d. Method 6 for SO₂ concentrations;
- e. Method 7 for NO_x concentrations;
- f. Method 9 for visible emissions.

All other procedures for these compliance tests shall be in accordance with 40 CFR 60 Subpart D paragraph 60.46.

Each facility shall operate within 10 percent of maximum operating rate during sampling. The parameters of operating rate, control equipment variables and all continuous monitoring results shall be recorded during compliance testing and made a part of the reported results.

The performance test for visible emissions from No. 7 power boiler shall be observed during the compliance tests for the PM mass emissions rate.

9. The permittee shall apply a chemical stabilizer to the active and inactive storage piles as needed to maintain an opacity of equal to or below 20 percent. Chemicals will be added in accordance with the manufacturer's recommendations.
10. The permittee shall operate a wet suppression spray system at all car dumps and shall enclose conveyors and transfer points to maintain an opacity of equal to or below 20 percent.
11. The applicant shall monitor fuel input to the No. 7 boiler and maintain a daily record of fuels fired consistent with the provisions of attached General Condition 4.
12. The source shall comply with the requirements of the attached General Conditions.

Table 1
Project Description Summary

<u>Facility</u>	<u>Operating Capacity</u>
A. New or Reconstructed	
1. No. 7 Power Boiler	1021/1084 ^{a,b}
2. Coal Handling	41 ^c
3. Ash Handling	4 ^c
B. Existing (To be shutdown or placed on "cold" standby)	
1. No. 6 Power Boiler	180 ^a
2. No. 3 Power Boiler ^d	227 ^a
3. No. 3 Recovery Boiler	248 ^a
4. No. 3 Smelt Tank	8.42 ^e

^aMillions Btu/hour (heat input).

^b100% coal/28.7% heat input from wood and 71.3% from coal.

^cTons/hour.

^dNo. 3 boiler on "cold" standby; not to be used except when a larger unit is temporarily and completely out of service.

^eTons/hour of smelt.

Table 2
Summary of Emissions
(tons per year)

<u>Facility</u>	<u>PM</u>	<u>SO₂</u>	<u>NO_x</u>	<u>VOC</u>	<u>CO</u>
New Construction					
Coal Storage and Coal Handling System	75 ^a	0	0	0	0
Ash Handling System	2	0	0	0	0
No. 7 Power Boiler	472	5363	2681	56	410
Total Allowed Increase ^b	549	5363	2681	56	410
To be Shut Down					
No. 6 Power Boiler	62	1737	260	3	21
No. 3 Power Boiler	80	2185	330	3	28
No. 3 Recovery Boiler	163	333	-	-	136
No. 3 Smelt Tank	<u>56</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Actual Decrease ^c	361	4255	590	6	185
Net Emissions Increase	188	1108	2091	50	225
Significant Emissions Increase	25	40	40	40	100
PSD Review Required	yes	yes	yes	yes	yes

^aRough EPA approximation of fugitive emissions from coal storage and handling.

^bBased upon worst case allowed emissions at full time operating schedule.

^cBased upon actual prior operating time.

Table 3

<u>Facility</u>	<u>Allowable Emission Limits</u>			<u>Basis</u>
	<u>lb/hr</u>	<u>Emission Limits</u> <u>Opacity</u>	<u>lb/MMBtu</u>	
Coal Handling System		20%		NSPS, BACT
Ash Handling System	0.5 ^a	5%		BACT
No. 7 Power Boiler (fueled by coal alone)				
PM	102	20%	0.1	NSPS, BACT
SO ₂	1225		1.2	NSPS, BACT
NO _x	613		0.6 ^{a,c}	BACT ^e
CO	d		d	BACT ^e
No. 7 Power Boiler (with a maximum of 71.3% of heat input from coal and a minimum of 28.6% waste)				
PM	108	20%	0.1	NSPS, BACT
SO ₂	930		1.2 coal ^a 0.01 ww ^a	BACT
NO _x	516		0.6 coal ^{a,c} 0.17 ww ^{a,f}	BACT ^e
CO	d		d d	BACT ^e

^aProposed by applicant.

^bDetermined by EPA consistent with mass rate

^cBased upon manufacturer's guarantee.

^dEmission limits will be determined by compliance testing. Worst case conditions will be used.

^eBACT control is to be established in accordance with Attachment II.

^fBased upon TRW, 1979; Air Pollutant Emission Factors for Wood-Fired Boilers, EPA Contract 68-02-2613, Task No. 30, Durham, NC, Table 3-2, EPA-600/7-79-219.

Table 4
 Analysis of Impacts Upon
 Class II Area PSD Increments

<u>Pollutant/ Averaging Time</u>	<u>Concentrations, ug/m³</u>		<u>Percent of Increment Consumed</u>
	<u>Net Change Modeled</u>	<u>Allowable Increment</u>	
PM			
Annual	-0.3 ^a (-0.2 ^b)	19 ^b	None
24-Hour	1.1	37 ^c	Not Significant
SO ₂			
Annual	1.3	20 ^a	6.5
24-Hour	28.1	91 ^c	30.9
3-Hour	93.3	512 ^c	18.2

^aArithmetic mean.

^bGeometric mean.

^cNot to be exceeded more than once per year.

^dModeled₃ concentration increase (1.1 ug/m³) is below the significance level (5 ug/m³) published 43FR26398 June 19, 1978.

Table 5
 Maximum Modeled Increase to
 Ambient Air at Class I Areas
 (All Concentrations, $\mu\text{g}/\text{m}^3$)

	<u>Okefenokee</u>	<u>Wolf Island</u>	<u>Class I Increments</u>
SO_2			
Annual	0.16	0.15	2
24-Hour	.63	.22	5
3-Hour	1.54	1.75	25
PM			
Annual	Negative	Negative	5
24-Hour	0.01	0.00	10

Table 6
Analysis of Impacts Upon NAAQS
(Ambient Concentrations, ug/m³)

<u>Pollutant/ Averaging Time</u>	<u>Applicant's Analysis</u>			<u>NAAQS^a</u>	<u>Worst Case Analysis</u>		
	<u>Background</u>	<u>Modeled</u>	<u>Total</u>		<u>Monitored</u>	<u>Modeled</u>	<u>Total</u>
PM							
Annual	39.5 ^d (56.7) ^c	4.5 ^c	44 ^d	60 ^d	Not Required		
24-Hour	86.7	24.7	111.4	150	Not Required		
SO ₂							
Annual	26.1	14.4	40.5	80	46	14	60
24-Hour	75.5	96.0	171.5	365	219	96	315
3-Hour	75.5	374.4	449.9	1300	493 ^e	374	867
NO _x							
Annual	30.0 ^f	3.0	33.0	100			

^aThe lower concentration of either primary or secondary standard.

^bMaximum monitored value excluding measurements identified by Florida DER as caused by known upset at ITT, Rayonier, and excluding measurements made with no temperature control on gas bubbler.

^cArithmetic mean.

^dGeometric mean.

^eNo 3-hour data available; therefore, this is ratioed from 24-hour data.

^fAssumed by applicant as 150% of an EPA suggested value for rural locations.

Table 7
 Allowable Emissions Limits
 for Boiler No. 7

<u>Emission Unit</u>	<u>Maximum Heat Input (MMBtu/hr)</u>	<u>PM</u>	<u>SO₂</u>	<u>NO_x</u>
Boiler No. 7				
Coal Firing	1021			
1b/hr		102	1225	613
1b/MMBtu		0.1	1.2	0.6
Wood Firing	1084			
1b/hr		108	11	184
1b/MMBtu		0.1	0.01	0.17
Combination Wood and Coal	1084			
1b/hr		108	a	b
1b/MMBtu		0.1	a	b

^aThe SO₂ and NO_x emissions limits for combination firing of coal and wood is prorated by the heat input from each fuel fired determined as follows:

$$\text{SO}_2 \text{ Emission Limit in lb/MMBtu} = \frac{\text{Wood Btu Input} \times (0.01) + \text{Coal Btu Input} \times (1.2)}{\text{Total Btu Input}}$$

$$\text{NO}_x \text{ Emission Limit in lb/MMBtu} = \frac{\text{Wood Btu Input} \times (0.17) + \text{Coal Btu Input} \times (0.6)}{\text{Total Btu Input}}$$

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.
2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.
3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.
4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.
5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:
 - (a) description of noncomplying emission(s),
 - (b) cause of noncompliance,
 - (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,
 - (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,and
 - (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.
7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.
8. The permittee shall allow representatives of the State environmental control agency and/or representatives of the Environmental Protection Agency, upon the presentation of credentials:
 - (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
 - (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;
 - (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;
 - (d) to sample at reasonable times any emission of pollutants;and
 - (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.
9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

Chief, Air Facilities Branch
Air and Hazardous Materials Division
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365
10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

ATTACHMENT II

USE OF FLUE GAS OXYGEN METER AS BACT FOR
COMBUSTION CONTROLS

Within the time limits specified in General Condition 3 of this permit, the permittee shall determine the emissions of nitrogen oxides and carbon monoxide from the permitted combustion device in accordance with test methods and procedures set out in 40 CFR Part 60, Appendix A, Methods 7 and 10, respectively. These emission determinations shall be made at:

- 1) Maximum design capacity; and
- 2) Normal operational load.

The permittee shall install a continuous oxygen monitor in the flue of the permitted combustion device which meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3. Results of emission determinations shall be correlated to the flue gas oxygen content to define:

- 1) The point at which Nitrogen Oxides (NO_x) emissions (lb/MMBtu) equals the allowable NO_x emission rate contained in the permit.
- 2) The point at which carbon monoxide (CO) emissions exceed the allowable CO emission rate contained in the permit.

The flue gas oxygen content shall be maintained between these points and alarms shall be set to sound when flue gas oxygen levels exceed either side of this range. Any operation outside of this range will constitute noncompliance with this specific condition, shall be recorded in accordance with General Condition 4 of this permit, and will be reported quarterly along with excess emissions in accordance with 40 CFR 60.7 (c).

Should any combustion equipment modifications be made such as different type burners, combustion air relocation, fuel conversion, tube removal or addition, etc., emissions correlations as described above shall be conducted within 90 days of attaining full operation after such modification. Results of all emission determinations shall be sent to the permitting authority within 90 days after completion of the tests.

Response to Public Comment
Container Corporation of America
PSD-FL 062

A single letter, received from Mr. Charles Whalen, Counsel, Container Corporation of America, questioned several points of understanding. The areas of question and EPA responses are as follows:

Comment 1

Clarification that No. 3 Power Boiler could be brought from a "cold" standby condition if one or more of the larger boilers is out of service; the phrase "in an emergency", which is redundant and perhaps ambiguous, has been deleted (page 1).

Response 1

The phrase "in an emergency" was deleted in the Preliminary Determination. This did not change any meaning of the Determination.

Comment 2

An understanding that "low sulfur coals" are those which by reason of combined sulfur and heat content, result in emissions not exceeding 1.2 lb/MMBtu and hence that the maximum percent sulfur will vary up or down depending upon the heat content of the coal (page 4).

Response 2

The commenter is correct in his statement. The coal to be used is 0.75% sulfur and contains 1.2 pounds of SO₂ per million Btu heat input on a basis of a rolling average on a 30-day basis.

Comment 3

Our mutual understanding that the demonstration of sufficient space for a scrubber need not be provided 30 days prior to the letting of engineering or other contracts; instead, the "beginning of construction" refers to physical, on-site erection activities. (Section VI)

Response 3

The definition of construction, as it pertains to this permit, is fabrication, erection, installation, or modification of a source. The understanding is correct.

Comment 4

Deletion of any VOC emission limit, and of the sentence which might be interpreted as requiring a certain minimum level of wood firing. (Section V4)

Response 4

Uncontrolled emissions of VOC from the plant are less than 100 tons per year and therefore do not require PSD review or limitations. Sentences, phrases, and/or Tables which could be interpreted as requiring a certain minimum level have been deleted.

Comment 5

Clarification in Table 3 that the CO values will be determined by testing of this particular boiler, and not by AP-42 emission factors.

Response 5

The CO emission limits will be determined by compliance testing at worst case conditions. This has been stated as such in Table 3

Comment 6

In Table 7, deletion of the VOC emission limits.

Response 6

VOC emission limits in Table 7 were deleted. They had no PSD value.

Comment 7

Clarification that the sheet "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" is, in fact, the Attachment II referred to in footnote 3 of Table 3.

Response 7

"Use of Flue Gas Oxygen Meter as BACT For Combustion Controls" has been labeled as Attachment II.

Conclusion

The comments were considered in the development of both the Preliminary and Final Determinations for Container Corporation of America's proposed modification to their existing Fernandina Beach kraft paper mill (PSD-FL-062).