



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

January 5, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John L. West, General Manager  
Stone Container Corporation  
Post Office Box 26998  
Jacksonville, Florida 32226-6998

Re: DEP File No. 0310067-004-AC (PSD-FL-252)  
Recycled Fiber Paper Mill  
3 Package Boilers

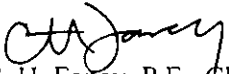
Dear Mr. West:

Enclosed is one copy of the Draft Permit, Technical Evaluation and Preliminary Determination, for the referenced project in Duval 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. John L. West,  
General Manager  
Stone Container Corporation  
Post Office Box 26998  
Jacksonville, FL 32226-6998

DEP File No. 0310067-004-AC  
DRAFT Permit No. PSD-FL-252  
Recycled Fiber Paper Mill  
3 Package Boilers  
Duval 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, Stone Container Corporation, applied on July 6, 1998, to the Department for a PSD permit to increase maximum steam production rate for each of the three boilers at its existing Jacksonville Mill in Duval 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 nitrogen oxide 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 officer 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 1-11-00 to the person(s) listed:

John L. West, Stone Container Corp. \*  
C. Kirts, DEP-NED  
J. Manning, RESD  
B. Oven, DEP-OSC  
D. Neely, EPA  
J. Bunyak, NPS  
D. Buff, Golder Associates  
D. Roberts, Esq., HGSS  
J. Antista, General Counsel, Fl Game & Fresh Water Fish Commission  
D. Russ, Esq., Dept. of Community Affairs  
E.M. Barker, Esq., Slott & Barker  
L.N. Curtin, Esq., Holland & Knight  
G.K. Radlinski, Esq., City of Jacksonville  
N.B. Barnard, Esq., St. Johns River Management District  
R. Vandiver, General Counsel, Fl Public Service Commission

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.

  
(Clerk)

1-11-00  
(Date)

2 031 391 916

US Postal Service  
**Receipt for Certified Mail**

No Insurance Coverage Provided.  
Do not use for International Mail (See reverse)

|   |  |
|---|--|
| Sent to<br><i>John West</i>                                 |  |
| Street & Number<br><i>Stone Container</i>                   |  |
| Post Office, State, & ZIP Code<br><i>Jax FL</i>             |  |
| Postage   | \$   |
| Certified Fee   |  |
| Special Delivery Fee  |  |
| Restricted Delivery Fee                                     |  |
| Return Receipt Showing to Whom & Date Delivered             |  |
| Return Receipt Showing to Whom, Date, & Addressee's Address |  |
| TOTAL Postage & Fees  | \$   |
| Postmark or Date  | <i>0310067-004 AC<br/>PSD-FI-252<br/>1-11-00</i> |

PS Form 3800, April 1995

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your 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.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:  
*John G. West, Gen. Mgr.  
Stone Container  
PO Box 26998  
Jacksonville, FL  
32226-6998*

4a. Article Number: *2 031 391 916*

- 4b. Service Type
- Registered
  - Certified
  - Express Mail
  - Insured
  - Return Receipt for Merchandise
  - COD

7. Date of Delivery: *1-11-00*

5. Received By: (Print Name):

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

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

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. 0310067-004-AC (PSD-FL-252)  
Duval 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 Stone Container Corporation. The permit will allow an increase in the maximum steam production rate and heat input rate for each of the three existing package boilers at its Jacksonville Mill in Duval County, Florida. The three package boilers are operated to support the recycled paper mill operations. Each of the three package boilers will increase the steam production rate from 125,000 lb/hr to 150,000 lb/hr, but will maintain the current permitted emission levels for nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>). Maximum heat input rate to each boiler will be 215 MMBtu/hr when firing natural gas, and 200 MMBtu/hr when firing No. 2 fuel oil. A Best Available Control Technology (BACT) determination was required for NO<sub>x</sub> pursuant to Rule 62-212.400, F.A.C.

The applicant's name and address are Stone Container Corporation, Post Office Box 26998, Jacksonville, Florida 32226-6998. The Jacksonville Mill is located at 9469 East Port Road, Jacksonville, Duval County, Florida.

NO<sub>x</sub> emissions from the package boilers will be controlled through low-NO<sub>x</sub> burners and Flue Gas Recirculation.

The net emissions increase due to the increased steam production for PSD applicability purposes is summarized below (in tons per year).

| <u>Pollutant</u> | <u>Net Emissions Increase</u> | <u>PSD Significant Emission Rate</u> |
|------------------|-------------------------------|--------------------------------------|
| NO <sub>x</sub>  | 304                           | 40                                   |

An air quality impact analysis was conducted for NO<sub>x</sub>. 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

Regulatory & Environmental  
Services Department (RESA)  
Suite 225, 117 W. Duval Street  
Jacksonville, Florida 32202  
Telephone: 904/630-3484  
Fax: 904/630-3638

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

STONE CONTAINER CORPORATION

Recycled Fiber Paper Mill  
Jacksonville, Duval County

DEP File No. 0310067-004-AC  
PSD-FL-252

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

January 5, 2000



# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

## 1. APPLICATION INFORMATION

### 1.1 Applicant Name and Address

Stone Container Corporation (SCC)  
9469 East Port Road  
Jacksonville, Florida 32229

Authorized Representative: Mr. John L. West, General Manager

### 1.2 Reviewing and Process Schedule

07-06-98: Date of Receipt of Application  
08-04-98: DEP Completeness Request  
09-09-98: SCC's letter requesting additional time for response to DEP's Completeness Request of 08-04-98  
08-12-99: SCC's response to DEP's Completeness Request of 08-04-98  
09-08-99: DEP's 2<sup>nd</sup> Completeness Request  
09-10-99: DEP's 3<sup>rd</sup> Completeness Request  
09-22-99: DEP's 4<sup>th</sup> Completeness Request  
09-23-99: SCC's response to DEP's Completeness Requests of 09-08-99  
10-07-99: SCC's response to DEP's Completeness Request of 09-22-99  
12-07-99: SCC's response to DEP's Completeness Request of 09-10-99. Application complete  
01-xx-00: Issue Intent

## 2. FACILITY INFORMATION

### 2.1 Facility Location

Stone Container Corporation (SCC) currently operates a 100-percent recycled fiber paper mill facility located in Jacksonville, Duval County. This site is approximately 61 kilometers from the Okefenokee National Wilderness Refuge, a Class I PSD Area. The UTM coordinates of this facility are Zone 17; 442.4 km E; 3365.4 km N.

### 2.2 Standard Industrial Classification Codes (SIC)

|                    |      |                           |
|--------------------|------|---------------------------|
| Major Group No.    | 26   | Paper and Allied Products |
| Industry Group No. | 2621 | Paper Mills               |

### 2.3 Facility Category

The facility has been operating as a 100-percent recycled fiber facility since 1992 in Jacksonville, Florida. Formerly, the facility had two bark boilers and three power boilers to provide steam to the paper making process. These five boilers were shut down in March, 1994, when the U.S. Generating Company Cedar Bay facility began commercial operation. The recycled fiber facility requires additional steam beyond that provided by the Cedar bay facility. As a result, three new package boilers were installed by SCC to provide this necessary steam.

# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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 NO<sub>x</sub>. As such, this pollutant is subject to review under the PSD permitting program.

### 3. PROJECT DESCRIPTION

This permit addresses the following emissions units:

| EMISSION UNIT No. | SYSTEM  | EMISSION UNIT DESCRIPTION |
|-------------------|---------|---------------------------|
| 022               | Process | Package Boiler No. 1      |
| 023               | Process | Package Boiler No. 2      |
| 026               | Process | Package Boiler No. 3      |

SCC currently operates a 100-percent recycled fiber paper mill located in Jacksonville, Florida. Three package boilers are operated to support the paper mill operations. The boilers are fired with natural gas or very low sulfur No. 2 fuel oil with a maximum sulfur content of 0.05 percent, by weight. The current maximum steam production for each boiler is 125,000 lb/hr steam. The current maximum heat input to each boiler is 174.7 MMBtu/hr when firing natural gas, and 164.5 MMBtu/hr when firing No. 2 fuel oil.

The Cedar Bay cogeneration facility currently supplies SCC with steam. However, the SCC recycle fiber facility at times requires additional steam beyond that provided by the Cedar Bay facility. SCC is proposing to increase the maximum steam rate and heat input rate to the boilers, while maintaining the current permitted emission levels. The Site Certification (PA88-24A) Conditions of Certification (COC) for Cedar Bay Cogeneration Project is also being modified. However, the only condition requiring modification is that related to SCC steam boiler emissions (Condition II.E), and that only so far as the limitation on steam rate for the SCC boilers (i.e., 375,000 lb/hr steam to be revised to 450,000 lb/hr steam). No change in emission limits contained in the COC is necessary or requested. The boilers currently have permitted allowable emission rates for nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>). Each of the three package boilers will be rated at 150,000 lb/hr steam at 650 psig and 750°F. Maximum heat input to each boiler will be 215 MMBtu/hr when firing natural gas, and 200 MMBtu/hr when firing No. 2 fuel oil. Firing of No. 2 fuel oil will be limited to 10,750,000 gallons per year for all three boilers combined. This limit will insure SO<sub>2</sub> emissions do not exceed the PSD significance level of 40 tons per year.

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The proposed project will result in an increase in NO<sub>x</sub> emissions over and above the PSD significance level per Table 62-212.400-2, F.A.C. Therefore, PSD review is required for NO<sub>x</sub>. None of the other pollutants are above the significant emission increases per Table 62-212.400-2, F.A.C., and will not undergo PSD review.

Estimated emissions from the proposed project are shown below:

| POLLUTANT        | EXISTING EMISSIONS (TPY) | PROPOSED EMISSIONS (TPY) | NET CHANGE IN EMISSIONS (TPY) | PSD REVIEW APPLIES? |
|------------------|--------------------------|--------------------------|-------------------------------|---------------------|
| PM               | 0.63                     | 20.9                     | 20.3                          | No                  |
| PM <sub>10</sub> | 0.63                     | 15.5                     | 14.9                          | No                  |
| SO <sub>2</sub>  | 0.08                     | 39.8                     | 39.7                          | No                  |
| NO <sub>x</sub>  | 6.28                     | 310                      | 303.7                         | Yes                 |
| CO               | 2.62                     | 58.4                     | 55.8                          | No                  |
| VOC              | 0.18                     | 3.88                     | 3.70                          | No                  |
| Pb               | 3.40E-05                 | 0.0072                   | 0.0072                        | No                  |
| Hg               | 1.88E-08                 | 0.0022                   | 0.0022                        | No                  |
| F                | 0.0                      | 0.024                    | 0.024                         | No                  |
| SAM              | 0.0                      | 0.66                     | 0.66                          | No                  |

#### 4. RULE APPLICABILITY

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 Duval 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 NO<sub>x</sub> 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:

# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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|                 |  |
|-----------------|--|
| 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            |

## 5. SOURCE IMPACT ANALYSIS

### 5.1 Air Quality Analysis

#### 5.1.1 Introduction

The proposed project will result in a net increase in emissions of NO<sub>2</sub> at levels in excess of PSD significant amounts. The air quality impact analyses required by the PSD regulations for this pollutant includes:

- A significant impact analysis;
- An analysis of existing air quality;
- An Ambient Air Quality Standards (AAQS) analysis;
- A PSD increment analysis;
- An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

For NO<sub>x</sub> the significant impact analyses performed by the applicant predicted maximum off-site impacts of greater than the significance level of 1 µg/m<sup>3</sup>, annual average, in the vicinity of the facility but less than 0.1 µg/m<sup>3</sup>, annual average, at the PSD Class I areas. As a result, the applicant was required to perform a PSD Class II Increment Analysis, an AAQS Analysis, and an Additional Impact Analysis at the PSD Class I areas.

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

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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.

### 5.1.2 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 the maximum predicted NO<sub>2</sub> impact 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 NO<sub>2</sub> Air Quality Impact for Comparison to the Monitoring *de Minimis* Level.**

| Averaging Time | Max Predicted Impact (ug/m <sup>3</sup> ) | De Minimis Level (ug/m <sup>3</sup> ) | Impact Greater Than <i>de Minimis</i> ? |
|----------------|---|---------------------------------------|---|
| Annual         | 1.23                                      | 14                                    | No                                      |

### 5.1.3 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

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

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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 1983 through 1987. 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.

### 5.1.4 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 any applicable AAQS and PSD increments. The SCC facility is located in a PSD Class II area. A total of 350 receptors were used in the significant impact analysis. These receptors were placed along 36 polar radials spaced 10 degrees apart and centered on SCC's package boilers. The innermost receptors along each radial were located on the plant property boundary. An additional 134 off-property receptors were located at distances of 0.4, 0.6, 0.8, 1.0 and 1.2 kilometers from the origin to cover the area between the property boundary and the closest regular receptor grid distance of 1.5 km. Additional regular receptors were located offsite along each radial at distances of 2.0, 3.0, 4.0 and 5.0 kilometers from the modeling origin.

In addition, eleven discrete receptors were used to predict NO<sub>2</sub> impacts at the two closest PSD Class I areas. Ten of the 11 receptors were located along the southern and eastern boundaries of the Okefenokee National Wilderness Refuge (ONWR) located approximately 160 kilometers (km) northwest of the facility. One additional receptor was located at the Wolf Island National Wilderness Refuge (WINWR), located approximately 100 km north of the facility.

The tables below summarize the results of this modeling. The maximum predicted air quality impacts due to NO<sub>x</sub> emissions from the proposed project are greater than the significant impact level in the vicinity of the facility. Therefore, the applicant was required to do further NO<sub>2</sub>

## TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

modeling in the vicinity of the facility, within the applicable significant impact area, to determine the impact of the project along with all other sources in the vicinity of the facility. The significant impact area is based upon the predicted radius of significant impact. The maximum predicted air quality impact due to NO<sub>x</sub> emissions is less than the significant impact level in the Class I areas; therefore, no further Class I modeling was required

| <b>MAXIMUM PROJECT AIR QUALITY IMPACT FOR COMPARISON TO THE PSD CLASS II SIGNIFICANT IMPACT LEVEL IN THE VICINITY OF THE FACILITY</b> |                       |  |  |                                    |  |
|---|-----------------------|--|--|------------------------------------|--|
| <b>Pollutant</b>  | <b>Averaging Time</b> | <b>Maximum Predicted Impact (µg/m<sup>3</sup>)</b> | <b>Significant Impact Level (µg/m<sup>3</sup>)</b> | <b>Significant Impact (Yes/No)</b> | <b>Radius of Significant Impact (km)</b> |
| NO <sub>2</sub>   | Annual                | 1.23   | 1  | Yes                                | 0.6                                      |

| <b>MAXIMUM PROJECT IMPACT IN THE OKEFENOKEE AND WOLF ISLAND NWA'S FOR COMPARISON TO THE PSD CLASS I SIGNIFICANT IMPACT LEVEL</b> |                       |  |  |                                    |
|--|-----------------------|--|--|------------------------------------|
| <b>Pollutant</b>   | <b>Averaging Time</b> | <b>Maximum Predicted Impact (µg/m<sup>3</sup>)</b> | <b>Significant Impact Level (µg/m<sup>3</sup>)</b> | <b>Significant Impact (Yes/No)</b> |
| NO <sub>2</sub>  | Annual                | 0.009  | 0.1  | No                                 |

### 5.1.5 Compliance with AAQS and PSD Increments

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant. The results of the PSD Class II increment analysis presented in the table below show that the maximum predicted multi-source impact is less than the allowable Class II increment.

| <b>PSD CLASS II INCREMENT ANALYSIS</b> |                       |  |   |   |
|--|-----------------------|--|---|---|
| <b>Pollutant</b>                       | <b>Averaging Time</b> | <b>Maximum Predicted Impact (µg/m<sup>3</sup>)</b> | <b>Impact Greater than Allowable Increment (Yes/No)</b> | <b>Allowable Increment (µg/m<sup>3</sup>)</b> |
| NO <sub>2</sub>                        | Annual                | <0.0   | No  | 25  |

For pollutants subject to an AAQS review, the total impact on ambient air quality is obtained by adding a "background" concentration to the maximum modeled concentration. This "background"

# TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

concentration takes into account all sources of a particular pollutant that are not explicitly modeled. The results of the AAQS analysis are summarized in the table below. As shown in this table, emissions from the proposed facility are not expected to cause or significantly contribute to a violation of any AAQS.

| AMBIENT AIR QUALITY IMPACTS |                |   |   |   |                                |   |
|-----------------------------|----------------|---|---|---|--------------------------------|---|
| Pollutant                   | Averaging Time | Major Sources Impact ( $\mu\text{g}/\text{m}^3$ ) | Background Concentration ( $\mu\text{g}/\text{m}^3$ ) | Total Impact ( $\mu\text{g}/\text{m}^3$ ) | Total Impact Greater than AAQS | Florida AAQS ( $\mu\text{g}/\text{m}^3$ ) |
| NO <sub>2</sub>             | Annual         | 11  | 28  | 39  | No                             | 100                                       |

## 5.2 Additional Impacts Analysis

### 5.2.1 Impact Analysis Impacts On Soils, Vegetation, Visibility, and Wildlife

The maximum ground-level concentrations predicted to occur due to NO<sub>x</sub> emissions as a result of the proposed project, including all other nearby sources, will be below the associated AAQS. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An air quality related values (AQRV) analysis was done by the applicant for the Class I area. No significant impacts on this area are expected.

### 5.2.2 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.

## 6. 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



**PERMITTEE:**

Stone Container Corporation  
9469 East Port Road  
Jacksonville, Florida 32229

*Authorized Representative:*  
Mr. John L. West, General Manager

|                 |                         |
|-----------------|-------------------------|
| <b>FID No.</b>  | 0310067                 |
| <b>PSD No.</b>  | PSD-FL-252              |
| <b>SIC No.</b>  | 2621                    |
| <b>Project:</b> | 3 Package Steam Boilers |
| <b>Expires:</b> | January 31, 2001        |

**PROJECT AND LOCATION:**

Permit for an increase in the maximum steam production rate for each package boiler at the Stone Container Corporation Recycled Fiber Paper Mill in Jacksonville. Each of the three package boilers will be rated at 150,000 lb/hr steam at 650 psig and 750°F. The project is located at 9469 East Port Road, Jacksonville, Duval County. The UTM coordinates of this facility are Zone 17; 442.4 km E; 3365.4 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

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Howard L. Rhodes, Director  
Division of Air Resources  
Management

## SECTION I. FACILITY INFORMATION

### FACILITY DESCRIPTION

Stone Container Corporation (SCC) currently operates a 100-percent recycled fiber paper mill facility located in Jacksonville, Duval County. This site is approximately 61 kilometers from the Okefenokee National Wilderness Refuge, a Class I PSD Area. The facility has been operating as a 100-percent recycled fiber facility since 1992 in Jacksonville, Florida. Formerly, the facility had two bark boilers and three power boilers to provide steam to the paper making process. These five boilers were shut down in March, 1994, when the U.S. Generating Company Cedar Bay facility began commercial operation. The recycled fiber facility requires additional steam beyond that provided by the Cedar Bay facility. As a result, three new package boilers were installed by SCC to provide this necessary steam.

SCC is proposing to increase the maximum steam rate and heat input rate to the boilers, while maintaining the current permitted emission levels. The boilers currently have permitted allowable emission rates for nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>). Each of the three package boilers will be rated at 150,000 lb/hr steam at 650 psig and 750°F. Maximum heat input to each boiler will be 215 MMBtu/hr when firing natural gas, and 200 MMBtu/hr when firing No. 2 fuel oil. Firing of No. 2 fuel oil will be limited to 10,750,000 gallons per year for all three boilers combined. This limit will insure SO<sub>2</sub> emissions do not exceed the PSD significance level of 40 tons per year.

The proposed project will result in an increase in NO<sub>x</sub> emissions over and above the PSD significance level per Table 62-212.400-2, F.A.C. Therefore, PSD review is required for NO<sub>x</sub>. None of the other pollutants are above the significant emission increases per Table 62-212.400-2, F.A.C., and will not undergo PSD review.

### REGULATORY CLASSIFICATION

The Stone Container 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 NO<sub>x</sub>. As such this pollutant is subject to review under the PSD permitting program.

# AIR CONSTRUCTION PERMIT 0310067-004-AC AND PSD-FL-252

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## PERMIT SCHEDULE:

|           |  |
|-----------|--|
| 07-06-98: | Date of Receipt of Application   |
| 08-04-98: | DEP Completeness Request   |
| 09-09-98: | SCC's letter requesting additional time for response to DEP's Completeness Request of 08-04-98 |
| 08-12-99: | SCC's response to DEP's Completeness Request of 08-04-98                                       |
| 09-08-99: | DEP's 2nd Completeness Request   |
| 09-10-99: | DEP's 3rd Completeness Request   |
| 09-22-99: | DEP's 4th Completeness Request   |
| 09-23-99: | SCC's response to DEP's Completeness Requests of 09-08-99                                      |
| 10-07-99: | SCC's response to DEP's Completeness Request of 09-22-99                                       |
| 12-07-99: | SCC's response to DEP's Completeness Request of 09-10-99.                                      |
|           | Application complete   |
| 01-xx-00: | Issue Intent   |

## 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: 07-06-98
- DEP's 1<sup>st</sup> Completeness Request: 08-04-98
- SCC's response to DEP's 1<sup>st</sup> Completeness Request: 08-12-99
- DEP's 2<sup>nd</sup> Completeness Request: 09-08-99
- DEP's 3<sup>rd</sup> Completeness Request: 09-10-99
- DEP's 4<sup>th</sup> Completeness Request: 09-22-99
- SCC's response to DEP's 2<sup>nd</sup> Completeness Request: 09-23-99
- SCC's response to DEP's 4<sup>th</sup> Completeness Request: 10-07-99
- SCC's response to DEP's 3<sup>rd</sup> Completeness Request: 12-07-99
- Application complete: 12-07-99
- Technical Evaluation and Preliminary Determination: 01-xx-00
- Best Available Control Technology determination (issued concurrently with permit)

**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 and Regulatory & Environmental Services Department (RESO) in Jacksonville. 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 January 31, 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 and RESO 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 and RESO. [**Chapter 62-213, F.A.C.**]
7. **New or Additional Conditions:** Pursuant to Rule 62-4.080(1), F.A.C., for good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [**Rule 62-4.080(1), F.A.C.**]
8. **Annual Reports:** Pursuant to Rule 62-210.370(3), F.A.C., Annual Operating Reports, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. Annual operating reports shall be sent to the Department's Northeast District Office and RESO by March 1<sup>st</sup> of each year. [**Rule 62-210.370(3), F.A.C.**]

**SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS**

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

| EMISSION UNIT No. | SYSTEM  | EMISSION UNIT DESCRIPTION |
|-------------------|---------|---------------------------|
| 022               | PROCESS | PACKAGE BOILER NO. 1      |
| 023               | PROCESS | PACKAGE BOILER NO. 2      |
| 026               | PROCESS | PACKAGE BOILER NO. 3      |

1. The construction and operation of these sources shall be in accordance with the capacities stated in the application dated June 1998. This permit shall replace PSD-FL-198(A).
2. The package boilers may each be operated continuously (8760 hrs/yr).
3. The maximum heat input rate to each boiler shall neither exceed 215 MMBtu/hr while firing natural gas nor 200 MMBtu/hr while firing No. 2 fuel oil.
4. In accordance with the terms of the Cedar Bay Cogeneration Project (CBCP) site certification, Stone Container Corporation (SCC) is limited to 640,000 lb/hr total steam consumption (380,000 lb/hr imported from CBCP and 260,000 lb/hr produced by SCC). When CBCP is not in operation or operating at reduced rates, SCC is permitted to produce up to 450,000 lb/hr steam and import up to 190,000 lb/hr from CBCP. This allows a maximum firing rate of 645 MMBtu/hr for all three package boilers when the CBCP facility is shutdown or operating at reduced rates.
5. The maximum allowable NO<sub>x</sub> emissions shall not exceed 0.2 lb/MMBtu, 34.94 lbs/hr and 153.1 tons/yr per boiler. The total NO<sub>x</sub> emissions from the three package boilers, in accordance with the terms of the CBCP site certification, shall not exceed 310 tons per year.
6. The three package boilers are permitted to fire both natural gas and No. 2 fuel oil, with the primary fuel being natural gas. The sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. Any delivery of No. 2 fuel oil shall be accompanied by a laboratory analysis quantifying the density and percent sulfur, by weight. Annual SO<sub>2</sub> emissions from No. 2 fuel oil firing, totaling all three boilers, shall not exceed 25 tons/year. In the event that the ceiling for SO<sub>2</sub> is expected to be exceeded due to unavailability of natural gas caused by factors beyond the control of SCC, SCC shall notify the Department that it anticipates exceeding the ceiling as provided herein; and, the emissions of SO<sub>2</sub> during the period of such curtailment shall not be counted against the yearly emissions ceiling of 25 tons unless administrative proceedings result in a finding that the exceedance was within SCC's control. In no event shall the total annual emissions of SO<sub>2</sub> from the three steam boilers exceed 41

tons/year. The notice shall include a statement or reasons for the request and supporting documentation, and shall be published by SCC, without supporting documents, in a newspaper of general circulation in Jacksonville, Florida, as defined in Section 403.5115(2), F.S. The filing and publication of the notice no later than 7 days following the date of exceedance, shall preclude any finding of violation by the Department until final disposition of any administrative proceedings.

7. Visible emissions (VE) shall not exceed 5 percent (%) opacity during natural gas firing and 10% opacity during fuel oil firing.
8. In accordance with the requirements of 40 CFR 60.48b(b), a continuous emission monitoring system (CEMs) for nitrogen oxides shall be installed, operated, and maintained. Also, the natural gas, fuel oil and steam flows (both from the package boilers and from the CBCP facility) shall be metered and continuously recorded. The data shall be logged daily and maintained so that it can be provided to the Department upon request.
9. Before this construction permit expires, each package boiler shall be tested and monitored for compliance with the emission limits in Specific Conditions No. 3, 5, 6 and 7. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 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 percent 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.
10. Compliance tests for NO<sub>x</sub> shall be conducted in accordance with 40 CFR 60.46b(e)(4). Compliance with SO<sub>2</sub> limits shall be in accordance with 40 CFR 60.49b(r), and a stoichiometric quantification for SO<sub>2</sub> emissions shall be utilized using the actual density and sulfur weight percent and the quantity of fuel oil fired monthly. Compliance with visible emission limits shall be demonstrated initially and annually in accordance with EPA Method 9.
11. The Department's Northeast District office and the RESD (City of Jacksonville's Regulatory and Environmental Services Department) office shall be notified at least 15 days prior to the compliance tests. Compliance test results shall be submitted to the Department's Northeast District and Bureau of Air Regulation offices and the RESD office within 45 days after completion of the tests. Sampling facilities, methods and reporting shall be in accordance with 40 CFR 60.49b, Chapter 62-297 and 40 CFR 60, Appendix A.
12. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation prior to 60 days before the expiration of the permit. (Rule 62-4.090, F.A.C.)

AIR CONSTRUCTION PERMIT 0310067-004-AC AND PSD-FL-252

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13. Pursuant to 40 CFR 60.49b(r), quarterly reports shall be submitted to the RESD office (i.e., Administrator) certifying that only very low sulfur oil (i.e.,  $\leq 0.05\%$  sulfur, by weight) meeting this definition was combusted in the affected facility during the preceding quarter. The firing of any fuel oil and its associated  $\text{SO}_2$  emissions shall be quantified on a monthly and per boiler basis and submitted to the RESD office by the end of the month following the end of each quarter. The quarters are defined as January-March, April-June, July-September and October-December; also, and per boiler, the final quarterly report shall include the total amount of the fuel oil fired and the quantified associated  $\text{SO}_2$  emissions for the year.

**APPENDIX BD**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

**Stone Container Corporation**  
**Recycled Fiber Paper Mill/ 3 Package Boilers**  
**PSD-FL-252 / 0310067-004-AC**  
**Jacksonville, Duval County**

Stone Container Corporation (SCC) has applied to increase the maximum steam rate and heat input rate to the three package boilers. The boilers are operated to support the paper mill operations. The boilers are fired with natural gas or No. 2 fuel oil with a maximum sulfur content of 0.05 percent by weight. SCC is currently requesting an increase in the maximum steam production rate for each boiler from 125,000 lb/hr to 150,000 lb/hr steam. The Cedar Bay cogeneration facility that is located adjacent to the existing SCC facility provides part of the steam required for the recycle fiber facility. The recycle fiber facility requires additional steam beyond that provided by the Cedar Bay facility. SCC desires more flexibility in steam production in the case of a shutdown or curtailment by Cedar Bay. According to the terms of the Cedar Bay Site Certification proceedings, SCC is to be limited to a total steam consumption of 640,000 lb/hr, which includes 380,000 lb/hr, imported from the Cedar Bay facility. This leaves 260,000 lb/hr to be produced by the three package boilers under normal operating conditions. During periods when Cedar Bay facility is shut down or operating at reduced rates, SCC will be allowed to produce up to 450,000 lb/hr steam from the three package boilers and import up to 190,000 lb/hr steam from the Cedar Bay facility. The total steam consumption cap of 640,000 lb/hr for SCC will still be in place.

The project is subject to Prevention of Significant Deterioration (PSD) review for NO<sub>x</sub> 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 Low-NO<sub>x</sub> burners and flue gas recirculation to minimize NO<sub>x</sub> emissions from the 3 Package Boilers.

**PROCESS EMISSIONS**

The applicant proposes the following emissions:

| <b>POLLUTANT</b> | <b>EXISTING EMISSIONS<br/>(TPY)</b> | <b>PROPOSED EMISSIONS<br/>(TPY)</b> | <b>NET CHANGE IN<br/>EMISSIONS<br/>(TPY)</b> | <b>PSD REVIEW<br/>APPLIES?</b> |
|------------------|-------------------------------------|-------------------------------------|--|--------------------------------|
| PM               | 0.63                                | 20.9                                | 20.3   | No                             |
| PM <sub>10</sub> | 0.63                                | 15.5                                | 14.9   | No                             |
| SO <sub>2</sub>  | 0.08                                | 39.8                                | 39.7   | No                             |
| NO <sub>x</sub>  | 6.28                                | 310                                 | 303.7  | Yes                            |

Stone Container Corporation  
 3 Package Boilers

DEP File No. 0310067-004-AC  
 PSD-FL-252



**APPENDIX BD**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

| <b>POLLUTANT</b> | <b>EXISTING EMISSIONS<br/>(TPY)</b> | <b>PROPOSED EMISSIONS<br/>(TPY)</b> | <b>NET CHANGE IN<br/>EMISSIONS<br/>(TPY)</b> | <b>PSD REVIEW<br/>APPLIES?</b> |
|------------------|-------------------------------------|-------------------------------------|--|--------------------------------|
| CO               | 2.62                                | 58.4                                | 55.8   | No                             |
| VOC              | 0.18                                | 3.88                                | 3.70   | No                             |
| Pb               | 3.40E-05                            | 0.0072                              | 0.0072                                       | No                             |
| Hg               | 1.88E-08                            | 0.0022                              | 0.0022                                       | No                             |
| F                | 0.0                                 | 0.024                               | 0.024  | No                             |
| SAM              | 0.0                                 | 0.66                                | 0.66   | No                             |

**DATE OF RECEIPT OF COMPLETE BACT APPLICATION:**

December 7, 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

**APPENDIX BD**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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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                          | CONTROL TECHNOLOGY                  |
|-----------------|---|-------------------------------------|
| NO <sub>x</sub> | 0.2 lb/MMBtu, 34.94 lb/hr and 153.1 TPY | Low-NO <sub>x</sub> burners and FGR |

**BACT ANALYSIS**

**NITROGEN OXIDES (NO<sub>x</sub>)**

Oxides of nitrogen (NO<sub>x</sub>) are generated during fuel combustion by oxidation of chemically bound nitrogen in the fuel (fuel NO<sub>x</sub>) and by thermal fixation of nitrogen in the combustion air (thermal NO<sub>x</sub>). As flame temperature increases, the amount of thermally generated NO<sub>x</sub> increases. Fuel type affects the quantity and type of NO<sub>x</sub> generated. Generally, natural gas is low in nitrogen. However it causes higher flame temperatures and generates more thermal NO<sub>x</sub> than oil or coal, which have higher fuel nitrogen content, but exhibit lower flame temperatures.

NO<sub>x</sub> emissions represent a significant portion of the total emissions generated by this project, and must be minimized using BACT. A review of EPA BACT/LAER Clearinghouse (BACT Clearinghouse) information indicates that no boilers in the size range of the SCC boilers (i.e., 100-300 MMBtu/hr) which fire primarily natural gas have been required to install Selective Catalytic Reduction (SCR) or Selective Non-Catalytic Reduction (SNCR) as BACT. All have employed low-NO<sub>x</sub> burners and flue gas recirculation (FGR), which the SCC boilers employ.

The applicant has proposed combustion controls equipped on the three package boilers which includes FGR and low NO<sub>x</sub> burners. The combination of FGR and low NO<sub>x</sub> burners results in less NO<sub>x</sub> formation. Low NO<sub>x</sub> burners reduce NO<sub>x</sub> by conducting the combustion process in stages. Staging partially delays the combustion process, resulting in a cooler flame which suppresses thermal NO<sub>x</sub> formation. NO<sub>x</sub> reductions of 40 to 85 percent (relative to uncontrolled emission levels) have been observed with low NO<sub>x</sub> burners when combined with flue gas recirculation.

In a FGR system, a portion of the flue gas is recycled from the stack to the burner windbox. Upon entering the windbox, the cooler gas is mixed with combustion air prior to being fed to the burner. The FGR system reduces NO<sub>x</sub> emissions by two mechanisms. In the first mechanism, the recycled flue gas is made up of combustion products which acts as inerts during combustion of the fuel/air mixture. This additional mass is heated in the combustion zone, thereby lowering the peak flame temperature and reducing the amount of NO<sub>x</sub> formed. Second, to a lesser extent, FGR also reduces NO<sub>x</sub> formation by lowering the oxygen concentration in the primary flame zone. **This**

**APPENDIX BD**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

combination of NO<sub>x</sub> controls and good combustion practices should provide effective emissions control.

**BACT DETERMINATION BY THE DEPARTMENT:**

Based on the information provided by the applicant and the information searches conducted by the Department, lower emissions limits can be obtained employing the top-down BACT approach for NO<sub>x</sub>.

**NO<sub>x</sub> DETERMINATION**

The top-down BACT approach for natural gas/fuel oil boilers listed in order from most stringent control to least:

1. Selective Catalytic Reduction (SCR)
2. Selective Noncatalytic Reduction (SNCR)
3. Good combustion design/practices

The following table summarizes the feasibility of using these control technologies with the Package Boilers as designed for installation in SCC Recycle Fiber Paper Mill.

| Control Technology                                      | Emission Reduction (%) | Technically Feasible | Cost per ton | Adverse Environ. Impacts |
|---|------------------------|----------------------|--------------|--------------------------|
| SCR with ammonia  | 80-90                  | Yes                  | \$4,600      | Yes                      |
| SNCR  | 40-70                  | Yes                  | \$8,000      | No                       |
| Low NO <sub>x</sub> Burners with Flue Gas Recirculation | 20-50                  | Yes                  | N/A          | No                       |

Assuming maximum boiler operation, the cost per ton for SCR is about \$4,600/ton. Using a still very conservative annual capacity factor of 50 percent, the cost effectiveness increases to more than \$7,300/ton. This economic impact is very high considering that normally SCC's boilers will not operate or will operate at very reduced rates, since Cedar Bay will provide the majority of the steam to SCC. For NO<sub>x</sub> emissions, the Department accepts the applicants proposed use of low NO<sub>x</sub> burners with flue gas recirculation as BACT for this project.

The BACT emission level established by the Department is as follows:

| POLLUTANT                          | EMISSION LIMIT  |
|------------------------------------|---|
| Nitrogen Oxides (NO <sub>x</sub> ) | 0.2 lb/mmBtu; 34.94 lb/hr and 153.1 TPY.<br>Total NO <sub>x</sub> emissions from 3 package boilers is limited to 310 TPY. |

**APPENDIX BD**  
**BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)**

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**COMPLIANCE**

Each package boiler shall be tested and monitored for compliance with the NO<sub>x</sub> emission limits in accordance with 40 CFR 60.46b(e)(4).

**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:

Approved By:

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

\_\_\_\_\_  
Howard L. Rhodes, Director  
Division of Air Resources Management

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Date:

**APPENDIX GC**  
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

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- 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.

**APPENDIX GC**  
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

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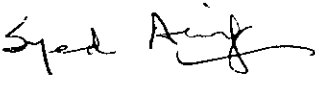
The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- 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 extent 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.

Florida Department of  
**Environmental Protection**

**Memorandum**

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TO: Clair Fancy  
FROM: Syed Arif   
DATE: January 4, 2000  
SUBJECT: Stone Container Jacksonville Mill  
PSD-FL-252; Three Package Boilers

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Attached is the Public Notice and draft permit modification to increase the maximum steam production rate and heat input rate for each of the three existing package boilers at their recycled paper mill in Jacksonville, Florida. The steam production rate for each boiler will increase from 125,000 lb/hr to 150,000 lb/hr while maintaining their current permitted emission levels for NO<sub>x</sub> and SO<sub>2</sub>.

A Best Available Control Technology determination was required for NO<sub>x</sub> pursuant to Rule 62-212.400, F.A.C. NO<sub>x</sub> emissions will be controlled through low-NO<sub>x</sub> burners and flue gas recirculation.

I recommend your approval and signature.

SA/a

Attachments



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

## P.E. Certification Statement

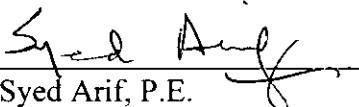
**Permittee:**

Stone Container Corporation  
Recycled Fiber Paper Mill  
3 Package Boilers

**DEP File No.:** 0310067-004-AC  
**Permit No.:** PSD-FL-252

**Project type:** Air Construction Permit for increase in the maximum steam rate and heat input rate to each of the three existing package boilers, while maintaining the current permitted emission levels. NO<sub>x</sub> emissions will be minimized by Low-NO<sub>x</sub> burners and Flue Gas recirculation.

*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.      1/4/2000  
Registration Number: 51861      Date

Department of Environmental Protection  
Bureau of Air Regulation  
New Source Review Section  
111 South Magnolia Drive, Suite 4  
Tallahassee, Florida 32301  
Phone (850) 921-9528  
Fax (850) 922-6979

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*