

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

June 16, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. Franklin Mixson
V. P. and General Manager
Jefferson Smurfit Corporation
1915 Wigmore Street
Jacksonville, Florida 32201

Dear Mr. Mixson:

Re: Amendments to Construction Permit No. AC 16-141869
Batch Digester System

The Department received your letter on June 14, 1988, requesting amendments to the above referenced construction permit. Additional clarification was received by phone for Specific Condition No. 2 from Mr. Gene Tonn and Mr. Norman Davis with Jefferson Smurfit Corporation by Mr. Bruce Mitchell (BAQM) on June 16, 1988. The Bureau agrees with the requests and the following will be changed and added:

Specific Conditions

No. 2:

From: The maximum production rate shall not exceed 89.08 TPH ADP (based on a nominal utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white/black liquor). For operation and PSD review purposes, the maximum daily production rate shall not exceed 1250 TPD ADP.

To: For testing purposes and NSPS applicability purposes, the maximum production rate of the digester system will be 89.08 TPH ADP (tons per hour air dried pulp). Tests for compliance will be performed with the control device (No. 3 Lime Kiln) operating at 90-100% of the maximum rate and with the digester system operating as near the maximum production rate as possible, but no less than 85% of the maximum rate. For PSD purposes, the maximum production rate of the digester system will be 1250 TPD ADP (tons per day air dried pulp: based on a nominal utilization rate of 4,808 TPD wood chips (wet @ 50% moisture) and 492 TPD white liquor (dry) and 211 TPD black liquor (dry)).

Mr. J. Franklin Mixson
Page Two
June 16, 1988

No. 9:

From: The permittee shall provide proof of compliance with FAC Rule 17-2.960(1)(d)1.b., by May 12, 1989, to the Duval County's Department of Health, Welfare and Bio-Environmental Services Division (BESD).

To: Pursuant to FAC Rule 17-2.960(1)(d)1.b., the batch digester system shall be in final compliance by May 12, 1989, and the permittee shall provide proof of final compliance by June 26, 1989, to the City of Jacksonville, Department of Health, Welfare and Bio-Environmental Services, Bio-Environmental Services Division (BESD) or request in writing that the Secretary or Secretary's designee grant an extension of time pursuant to FAC Rule 17-2.960(1)(e).

Attachment to be Incorporated:

10. Mr. J. Franklin Mixson's letter dated June 13, 1988, and received June 14, 1988.

This letter must be attached to the construction permit, No. AC 16-141869, and shall become a part of the permit.

Sincerely,

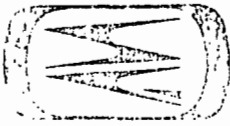


Dale Twachtmann
Secretary

DT/ks

cc: K. Mehta, BESD
B. Williams, JSC
J. Cox, JSC
D. Buff, P.E., KBN
B. Pittman, Esq., .DER

ATTACHMENT 10



JEFFERSON SMURFIT CORPORATION

401 ALTON STREET, P.O. BOX 276

ALTON, ILLINOIS 62002-2276

618/463-6000

904-IFL

June 13, 1988

Reply to: **Containerboard Mill Division**

1915 WIGMORE STREET

P.O. BOX 150

JACKSONVILLE, FL 32201

TELEPHONE: 904/353-3611

FEDERAL EXPRESS

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

RECEIVED

JUN 14 1988

DER-BAQM

SUBJECT: Construction Permit No. AC16-141869
Batch Digester System
Jefferson Smurfit Corporation
Jacksonville Mill

Dear Mr. Fancy:

The purpose of this letter is to request that two changes be made to the subject permit as agreed upon in a meeting with Mr. Thomas and Mr. Mitchell for DER, and Mr. Cox, Mr. Millican and Mr. Tonn for Jefferson Smurfit Corporation on April 13, 1988.

In discussing Specific Condition 2, the department agreed to revise the conditions to conditions being negotiated for other similar sources in the pulp and paper industry. The following language is suggested and requested as a replacement for the language of Specific Condition 2 in the construction permit issued March 18, 1988.

"For testing purposes and NSPS applicability purposes the maximum production rate of the digester system will be 89.08 TPH ADP (tons per hour, air dried pulp). Tests for compliance will be performed with the control device (No. 3 Lime Kiln) operating at 90-100% of the maximum rate and with the digester system operating as near the maximum production rate as possible, but no less than 85% of the maximum rate. For PSD purposes the maximum production rate of the digester system will be 1250 TPD ADP (tons per day air dried pulp: based on a nominal utilization rate of 4,808 TPD wood chips (wet @ 50% moisture) and 3,517 TPD cooking liquor)."

In Specific Condition 9, line 4, it is requested that the period after (BESD) be deleted and the following phrase follow (BESD): "or request in writing that the Secretary or Secretary's designee grant an extension of time pursuant to 17-2.960(1)(e) FAC."

The cooperation of you and your staff in this matter is greatly appreciated.

If there should be any questions, please call Gene Tonn at 904/353-3611, Extension 287 or write to me at the above address.

Very truly yours,

J. Franklin Mixson
J. Franklin Mixson
Vice President & General Manager

JFM/bem

cc: Khurshid Mehta, P.E., BESD

Bruce Mitchell 6-14-88 BEM

CH 187
Amendment to be...

Bruce

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. J. Franklin Mixson
Jefferson Smurfit Corporation
1915 Wigmore Street
Post Office Box 150
Jacksonville, Florida 32201

March 22, 1988

Enclosed is permit No. AC 16-141869, for Jefferson Smurfit Corporation to construct a new batch digester system consisting of five 6200 cu. ft. digesters with an automated operation system, associated Blow Tank/Blow Heat Condensing System, and Turpentine Recovery System. An associated noncondensable gas handling system will be installed to collect and transport all of the new batch digester system's TRS emissions to the No. 3 Lime Kiln, where the gases will be incinerated. The maximum daily pulp production rate will be 1250 TPD ADP (tons per day of air dried pulp). The location of the project will be at the Jefferson Smurfit's existing facility in Jacksonville, Duval County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.


Any Party to this permit has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road,

Jefferson Smurfit Corporation
March 22, 1988
Page 2

Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E.

Deputy Chief

Bureau of Air Quality Management

Copy furnished to:

B. Pittman, Esq., DER
K. Mehta, BESD
B. Williams, JSC
J. Cox, JSC
D. Buff, P.E., KBN

Final Determination

Jefferson Smurfit Corporation
Duval County
Jacksonville, Florida

Permit No. AC 16-141869

Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

March 17, 1988

Final Determination

The construction permit application has been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in The Florida Times Union on February 16, 1988. The Technical Evaluation and Preliminary Determination were available for public inspection at the Duval County's Bio-Environmental Services Division office in Jacksonville and the DER's Bureau of Air Quality Management office in Tallahassee.

Comments were received from Mr. J. Franklin Mixson, Vice President and General Manager of Jefferson Smurfit Corporation, Jacksonville mill, on February 12, 1988. The Bureau's responses to the comments will follow:

A. Technical Evaluation and Preliminary Determination (TE & PD)

The comments are acknowledged and the referenced letter will become an attachment to the permit. Since there are not any substantive changes to the TE & PD requested that would require further emissions review, there will not be any changes made to the TE & PD.

B. Construction Permit

1. General

a. Expiration Date

The Bureau agrees with the request to change the expiration date:

From: August 10, 1989
To: February 12, 1990

2. Cover Page

a. 2nd Paragraph, Line 4

The Bureau does not feel that testing requirements belong in the description of the project, but should be in the Specific Conditions. Since the multiple effect evaporator system's permit contains a maximum limit for processing black liquor solids (BLS), a limit of BLS product will not be placed on the batch digester system. Turpentine by-product from the batch digester system's operation will also not be capped, since the most independent parameter (pulp) will be capped and regulated. Therefore, the following will be changed and added:

From: The maximum daily pulp production will be 1250 TPD ADP (tons per day of air dried pulp).

To: The maximum hourly production rate shall not exceed 89.08 TPH ADP (tons per hour of air dried pulp and based on a nominal utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white/black liquor). The maximum daily production rate shall not exceed 1250 TPD ADP (tons per day of air dried pulp) and will be used for PSD (prevention of significant deterioration) review purposes.

3. Specific Conditions

a. No. 2

Since 89.08 TPH ADP is the maximum permitted production rate, at which demonstration of compliance is required, the word "only" is not appropriate. The 1250 TPD ADP is also a maximum production rate, enforceable, and is the basis for PSD review, because it allows the flexibility in the batch digester system's operation on a daily basis and lends consideration to potential down time with the batch digester system. The word "maximum" will be used for the work "peak", which is defined by Webster as "being at or reaching the maximum." Therefore, the following will be changed and added:

From: The peak production rate shall not exceed 89.08 TPH ADP (tons per hour of air dried pulp; based on a utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white liquor), 234,608 lbs/hr black liquor solids (dry), and 706 lbs/hr turpentine. The maximum daily production rate shall not exceed 1250 TPD ADP (tons per day of air dried pulp).

To: The maximum production rate shall not exceed 89.08 TPH ADP (based on a nominal utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white/black liquor). For operation and PSD review purposes, the maximum daily production rate shall not exceed 1250 TPD ADP.

b. No. 3

The Bureau agrees with the request and the following will be changed:

From: The permittee shall not discharge from the batch digester system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen unless the gases are combusted in the No. 3 lime kiln, from which the exhaust gases shall not contain TRS in excess of 8 ppm by volume on

a dry basis, corrected to 10 percent oxygen (in accordance with 40 CFR 60.283(a)(1)(i)).

To: The permittee shall not discharge from the batch digester system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen unless the gases are combusted in the No. 3 lime kiln, from which the exhaust gases shall not contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen (in accordance with 40 CFR 60.283(a)(1)).

c. No. 4

The Bureau agrees with the request since the assumption is part of the TE & PD, which is an attachment to the permit. Therefore, the following will be changed:

From: For inventory and PSD tracking purposes, the TRS potential emissions from the batch digester system will be considered zero (based on the permittee's control strategy and to be verified by conducting a verification test using EPA Methods 3 and 16 according to 40 CFR 60, Appendix A).

To: Deleted. See the Final Determination.

d. No. 9

The Bureau agrees with the request and the following will be changed and added:

From: The project shall provide proof of compliance with FAC Rule 17-2.960(1)(d)1.b., by May 12, 1989, to the Duval County's Department of Health, Welfare and Bio-Environmental Services Division (BESD).

To: The permittee shall provide proof of compliance with FAC Rule 17-2.960(1)(d)1.b., by May 12, 1989, to the Duval County's Department of Health, Welfare and Bio-Environmental Services Division (BESD).

e. No. 10

The Bureau agrees with the request and the following will be changed:

From: The expiration date of this permit coincides with the 90 days required to process a complete application for an operating permit after the final compliance date, in accordance with FAC Rule 17-4.

To: Deleted. See the Final Determination.

f. No. 12

The Bureau agrees with the requests and the following will be changed and added:

From: The BESD's office shall be notified in writing 15 days prior to source testing. Written reports of the tests shall be submitted to the BESD's office within 45 days of the test completion.

The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction and achieve final compliance on schedule, the BAQM's office and the BESD's office must be notified in writing 60 days prior to the final compliance date of the construction permit and the permittee shall submit appropriate information pursuant to FAC Rule 17-2.960(1)(e).

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the BESD's office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (Rules 17-2 and 17-4, FAC).

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (Rule 17-4, FAC)

To: The BESD's office shall be notified in writing 15 days prior to source testing pursuant to FAC Rule 17-2.700(2)(a)5. Written reports of the tests shall be submitted to the BESD's office within 45 days of the test completion.

The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction and

achieve final compliance on schedule, the BAQM's office and the BESD's office must be notified in writing 60 days prior to the final compliance date of the construction permit and the permittee shall submit appropriate information pursuant to FAC Rule 17-2.960(1)(e).

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit an application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the BESD's office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. (FAC Rules 17-2 and 17-4).

If the construction permit expires prior to the permittee requesting an extension or filing an application for a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct pursuant to FAC Rule 17-4.

g. No. 13

The Bureau agrees with the request and the following will be changed and added:

From: Any change in the method of operation, raw materials, equipment or operating hours shall be submitted for approval to the BESD's office and the BAQM's office.

To: Any change in the method of operation, raw materials or chemicals processed, equipment or operating hours shall be submitted for approval to the BESD's office and the BAQM's office pursuant to 40 CFR 60.14.

h. No. 14

The Bureau agrees with the request and the following will be changed and added:

From: The existing batch digester system shall be in final compliance (retired from service and all related permits surrendered to the Department or BESD) by May 12, 1989.

To: The existing batch digester system shall be in final compliance (retired from service and all related

permits surrendered to the Department or BESD) by May 12, 1989, or comply with FAC Rule 17-2.960(1)(e).

i. No. 15

The Bureau agrees with the request and the following will be changed and added:

From: The No. 3 Lime Kiln shall be tested for TRS and SO₂ emissions after the new batch digester system's TRS noncondensable gas handling system has been connected to it and the system is operating properly (40 CFR 60.8). The TRS emissions test, using EPA Methods 3 and 16 pursuant to 40 CFR 60, Appendix A, shall be used to verify complete destruction of the pollutant. The SO₂ emissions test, using EPA Method 6 pursuant to 40 CFR 60, Appendix A, shall be used to establish the overall removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system by comparing the test results with previously performed tests (initial compliance test: AC 16-095614). The results of the two tests and their comparisons to previous tests will be used to rule out or require further emissions review pursuant to FAC Rule 17-2.500 and to assess the appropriate processing fee pursuant to FAC Rule 17-4, of which \$100.00 (less than 25 TPY potential emissions) has already been received.

To: The No. 3 Lime Kiln shall be tested for TRS and SO₂ emissions after the new batch digester system's TRS noncondensable gas handling system has been connected to it and the system is operating properly (40 CFR 60.8). The TRS emissions tests, using EPA Methods 3 and 16 or 16A pursuant to 40 CFR 60, Appendix A, shall be used to verify compliance with the TRS emission limit pursuant to 40 CFR 60.283(a)(1)(i). The SO₂ emissions tests, using EPA Method 6 pursuant to 40 CFR 60, Appendix A, shall be used to establish the overall removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system. Two tests for SO₂ will be performed. There will be one test without incinerating digesting TRS gas in the kiln and one test while incinerating digesting TRS gas in the kiln. The results of the two tests will be used to rule out or require further emissions review pursuant to FAC Rule 17-2.500 and to assess the appropriate processing fee pursuant to FAC Rule 17-4, of which \$100.00 (less than 25 TPY potential emissions) has already been received.

j. No. 16

The Bureau agrees with the request and the following will be changed and added:

From: The No. 3 Lime Kiln's permit, No. AC 16-095614, shall be amended to reflect the intent of this permit and to identify that it will be receiving TRS emissions from the new batch digester system. The permittee of AC 16-095614 shall request an amendment to the permit at least 90 days prior to the final compliance date of May 12, 1989.

To: The No. 3 Lime Kiln permit, No. AC 16-095614, or any succeeding permit shall provide for the incineration of the TRS emissions from the new batch digester system. The permittee of AC 16-095614, or any succeeding permit shall insure that the above provision is incorporated in that permit prior to the final compliance date.

4. Attachments to be Incorporated:

8. Mr. J. Franklin Mixson's letter dated February 12, 1988, and received February 12, 1988.

9. Mr. Jerry E. Woosley's letter dated February 12, 1988, and received February 19, 1988.

The Bureau will incorporate the changes in the appropriate construction permit, as referenced above in the final determination. It is recommended that the construction permit be issued as drafted, with the above revisions and attachments incorporated.



FLORIDA PUBLISHING COMPANY
Publishers
JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared Bill Champion

who on oath says that he is
Retail Advertising Supervisor of The Florida Times-Union, and

Jacksonville Journal, daily newspapers published at Jacksonville in Duval County,
Florida; that the attached copy of advertisement, being a

Legal Notice

Notice of Intent

in the matter of

in the Court,

was published in The Florida Times Union

February 16, 1988

in the issues of

Affiant further says that the said The Florida Times-Union and Jacksonville Journal are each newspapers published at Jacksonville, in said Duval County, Florida, and that the said newspapers have each heretofore been continuously published in said Duval County, Florida, The Florida Times-Union each day, and Jacksonville Journal each day except Sundays, and each has been entered as second class mail matter at the postoffice in Jacksonville, in said Duval County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Sworn to and subscribed before me
this 16th day of
February, A.D. 1988

Notary Public,
State of Florida at Large.

Bill Champion

My Commission Expires

NOTARY PUBLIC STATE OF FLORIDA
My Commission Expires 12/31/1989

RECEIVED

FEB 16 1988

DER - BAQM

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Jefferson Smurfit Corporation to construct a new batch digester system consisting of five 6200 cu. ft. digesters with an automated operation system, associated Blow Tank/Blow Heat Condensing System, and Turpentine Recovery System. An associated noncondensable gas handling system will be installed to collect and transport all of the raw batch digester system's TRS emissions to the No. 3 Lime Kiln, where the gases will be incinerated. The design daily pulp production rate will be 1250 TPD ADP (tons per day of air dried pulp). The location of the project will be at Jefferson Smurfit's existing facility in Jacksonville, Duval County, Florida. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination. Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application 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:

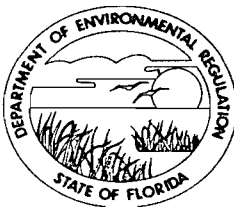
Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Health Welfare and Bio-Environmental Services
515 West 6th Street
Jacksonville, Florida 32206-4397

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Copy to Bruce Mitchell
Rodney Ray
Shirshid Mohr, Esq.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
Jefferson Smurfit Corp.
1915 Wigmore Street
P. O. Box 150
Jacksonville, FL 32201

Permit Number: AC 16-141869
Expiration Date: February 12, 1990
County: Duval
Latitude/Longitude: 30° 22' 00"N/
81° 37' 30" W
Project: Batch Digester System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of five 6200 cu. ft. digesters, associated Blow Tank/Blow Heat Condensing System and Turpentine Recovery System, and associated TRS noncondensable gas handling system. The maximum hourly production rate shall not exceed 89.08 TPH ADP (tons per hour of air dried pulp and based on a nominal utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white/black liquor). The maximum daily production rate shall not exceed 1250 TPD ADP (tons per day of air dried pulp) and will be used for PSD (prevention of significant deterioration) review purposes. The location of the project will be at Jefferson Smurfit Corporation's existing facility in Jacksonville, Duval County, Florida. The UTM coordinates are Zone 17, 439.8 km East and 3359.4 km North.

The Standard Industrial Codes are: Industry No. 2621-Paper Mills
The Standard Classification Codes are: Pulp & Paper Industry
Major Group 26: Sulfate (Kraft) Pulping
o Digester Relief & Blow Tank 3-07-001-01
o Turpentine Condenser 3-07-001-07
o Accumulator 3-07-001-99

Construction will be in accordance with the permit application, plans, documents, and reference material submitted unless otherwise stated in the General and Specific Conditions.

Attachments to be Incorporated:

1. Mr. J. Franklin Mixson's cover letter and application package dated November 9, 1987, and received November 12, 1987.
2. Mr. J. E. Woosley's letter dated/received December 10, 1987.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

ATTACHMENTS (continued):

3. Mr. C. H. Fancy's letter dated December 11, 1987.
4. Mr. J. Franklin Mixson's letter dated January 6, 1988, and received January 11, 1988.
5. Mr. J. Franklin Mixson's letter on a petition dated January 18, 1988, and received January 19, 1988.
6. Mr. J. Franklin Mixson's letter of additional information dated January 18, 1988, and received January 19, 1988.
7. The Technical Evaluation and Preliminary Determination dated January 25, 1988.
8. Mr. J. Franklin Mixson's letter dated February 12, 1988, and received February 12, 1988.
9. Mr. J. E. Woosley's letter dated February 12, 1988, and received February 19, 1988.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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 does not constitute a waiver of 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.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement 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.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, 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.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

GENERAL CONDITIONS:

6. The permittee shall at all times 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.

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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring 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.

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 notify and provide the Department with the following information:

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

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

GENERAL CONDITIONS:

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 revocation of this permit.

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 arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- () Determination of Best Available Control Technology (BACT)
- () Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

GENERAL CONDITIONS:

- b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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:
- the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

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 submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The project may operate continuously (i.e., 8760 hrs/yr).

2. The maximum production rate shall not exceed 89.08 TPH ADP (based on a nominal utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white/black liquor). For operation and PSD review purposes, the maximum daily production rate shall not exceed 1250 TPD ADP.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

SPECIFIC CONDITIONS:

3. The permittee shall not discharge from the batch digester system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen unless the gases are combusted in the No. 3 lime kiln, from which the exhaust gases shall not contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen (in accordance with 40 CFR 60.283(a)(1)).

4. Deleted. See the Final Determination.

5. The batch digester system is subject to the requirements of Florida Administrative Code (FAC) Rule 17-2.660(3), General Provisions.

6. Operation reports and records shall be in accordance with 40 CFR 60.284(d), Monitoring of Emissions and Operations, and FAC Rule 17-2.710(4), Continuous Monitoring Requirements.

7. The initial and annual compliance tests shall be conducted in accordance with 40 CFR 60.285, Test Methods and Procedures. The initial compliance test shall be in accordance with 40 CFR 60.8.

8. All process equipment shall be inspected regularly and maintained in good operating condition to minimize fugitive gaseous emissions.

9. The permittee shall provide proof of compliance with FAC Rule 17-2.960(1)(d)1.b., by May 12, 1989, to the Duval County's Department of Health, Welfare and Bio-Environmental Services Division (BESD).

10. Deleted. See the Final Determination.

11. This project shall comply with all the applicable requirements of FAC Rules 17-2 and 17-4, and 40 CFR 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

12. The BESD's office shall be notified in writing 15 days prior to source testing pursuant to FAC Rule 17-2.700(2)(a)5. Written reports of the tests shall be submitted to the BESD's office within 45 days of the test completion.

The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction and achieve final compliance

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

SPECIFIC CONDITIONS:

on schedule, the BAQM's office and the BESD's office must be notified in writing 60 days prior to the final compliance date of the construction permit and the permittee shall submit appropriate information pursuant to FAC Rule 17-2.960(1)(e).

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit an application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the BESD's office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. (FAC Rules 17-2 and 17-4).

If the construction permit expires prior to the permittee requesting an extension or filing an application for a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct pursuant to FAC Rule 17-4.

13. Any change in the method of operation, raw materials or chemicals processed, equipment or operating hours shall be submitted for approval to the BESD's office and the BAQM's office pursuant to 40 CFR 60.14.

14. The existing batch digester system shall be in final compliance (retired from service and all related permits surrendered to the Department or BESD) by May 12, 1989, or comply with FAC Rule 17-2.960(1)(e).

15. The No. 3 Lime Kiln shall be tested for TRS and SO₂ emissions after the new batch digester system's TRS noncondensable gas handling system has been connected to it and the system is operating properly (40 CFR 60.8). The TRS emissions tests, using EPA Methods 3 and 16 or 16A pursuant to 40 CFR 60, Appendix A, shall be used to verify compliance with the TRS emission limit pursuant to 40 CFR 60.283(a)(1)(i). The SO₂ emissions tests, using EPA Method 6 pursuant to 40 CFR 60, Appendix A, shall be used to establish the overall removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system. Two tests for SO₂ will be performed. There will be one test without incinerating digesting TRS gas in the kiln and one test while incinerating digesting TRS gas in the kiln. The results of the two tests will be used to rule out or require further emissions

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: February 12, 1990

SPECIFIC CONDITIONS:

review pursuant to FAC Rule 17-2.500 and to assess the appropriate processing fee pursuant to FAC Rule 17-4, of which \$100.00 (less than 25 TPY potential emissions) has already been received.

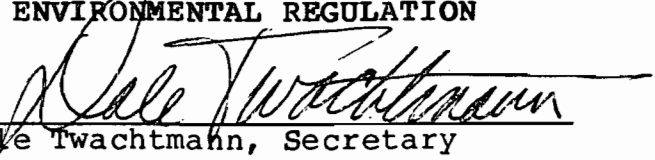
16. The No. 3 Lime Kiln permit, No. AC 16-095614, or any succeeding permit shall provide for the incineration of the TRS emissions from the new batch digester system. The permittee of AC 16-095614, or any succeeding permit shall insure that the above provision is incorporated in that permit prior to the final compliance date.

17. The batch digester system and its control system are subject to the provisions of FAC Rule 17-2.600(4)(c)1.c.

18. Objectionable odors shall not be allowed off of the plant property pursuant to FAC Rule 17-2.620(2).

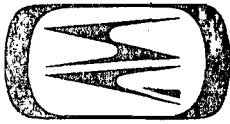
Issued this 18 day of March,
1989.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


Dale Twachtmann, Secretary

ATTACHMENT 8

2-12-88



JEFFERSON SMURFIT CORPORATION

401 ALTON STREET, P.O. BOX 276
ALTON, ILLINOIS 62002-2276

618/463-6000

Reply to: **Containerboard Mill Division**
1915 WIGMORE STREET
P.O. BOX 150
JACKSONVILLE, FL 32201
TELEPHONE: 904/353-3611

February 12, 1988

DER
FEB 12, 1988
BAQM

Mr. Bill Thomas
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2600

**Re: Comments on Technical evaluation and preliminary determination
and proposed permit for Jefferson Smurfit new batch
digester system AC 16-141869**

Dear Mr. Thomas:

This letter is to provide the subject comments which are based on agreements developed in the meeting with you, Mr. Mitchell and Mr. Raval for DER and Mr. Cox and Mr. Millican for Jefferson Smurfit on February 11, 1988.

We appreciate your cooperation and counsel in developing the final conditions for the permit.

Technical evaluation and preliminary determination

On page 3, in the first paragraph on the fourth line delete "total destruction of the TRS gases" and insert "compliance with TRS emission limits".

In paragraph 7 on line two insert "to atmosphere" after "emissions". On line five after "verify" delete "that there is not an increase in TRS emissions in" and insert "compliance with TRS emissions from." On line six after "16" insert "or 16A". Beginning on line seven after "performed" delete the remainder of the paragraph. Replace with "two tests for TRS will be performed. There will be one test without incinerating digesting TRS gas in the kiln and one test while incinerating digesting TRS gas in the kiln. The results of these two tests will be used to rule out or require further emission review pursuant to FAC Rule 17-2.500, PSD.

Mr. Bill Thomas
February 12, 1988
Page Two

On page 4, line 1 after "(40 CFR 60.8)" delete the remainder of the paragraph. Insert "Two tests for SO₂ will be performed. There will be one test without incinerating digesting TRS gas in the kiln and one test while incinerating digesting TRS gas in the kiln. The results of these two test will be used to rule out or require further emissions review pursuant to F.A.C. Rule 17-2.500, PSD. Also on page 4, 4th line of last paragraph change "any" to "an". Also on page 4 in the 5th line of the last paragraph insert "above those stated above" between "kiln" and "established".

On page 6, 4th paragraph, line 7 after "comparisons" insert "of mass emissions." and delete the remainder of the paragraph.

On page 6, 5th paragraph, line 6 insert a "period" after "established" ending the sentence. Delete the remainder of the paragraph and insert "Two tests for SO₂ will be performed. There will be one test without incinerating digesting TRS gas in the kiln and one test while incinerating digesting TRS gas in the kiln. The results of these two tests will be used to rule out or require further emission review pursuant to F.A.C. Rule 17-2.500, PSD."

Draft Permit

On every page of the permit change expiration date to February 12, 1990.

On page 1, 2nd paragraph, line 4 delete the sentence beginning with "The maximum" and insert:

"For testing purposes only the peak production rate shall not exceed 89.08 TPH ADP (tons per hour of air dried pulp: based on a projected utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white liquor, 234,608 lbs/hr black liquor solids (dry) and 706 lbs/hr turpentine). For PSD purposes only, the maximum daily production rate shall not exceed 1250 TPD ADP (tons per day of air dried pulp)."

Specific Conditions

1. No change
 2. Delete S.C. 2 and replace with:
For testing purposes only, the peak
production rate shall not exceed 89.08
tons per hour air dried pulp. For
PSD purposes only, the maximum daily
production rate shall not exceed 1250
tons per day air dried pulp.
 3. Change line 7 from 60.283(a)(1)(i) to 60.283(a)(1).
 4. Delete
 5. No change
 6. No change
 7. No change
 8. No change
 9. Change the word "project" to "permittee" and after
(BESD) add "or request in writing that the Secretary
or Secretary's designee grant an extension of time
pursuant to 17-2.960(1)(e).
 10. Delete
 11. No change
 12. On line 2 after "testing" insert "pursuant to F.A.C.
17-2.700 (2)(a)5.
- 2nd paragraph of S.C. 12 - no change
- 3rd paragraph of S.C. 12, line 3 delete the word "complete".
On line 8 delete sentence beginning "Operation beyond".
Retain the reference to Rule 17-2 and 17-4 F.A.C.

4th paragraph of S.C. 12 on line 2 delete the word "obtaining" and insert "filing on application for". On line 4 delete remainder after "construct" and insert "pursuant to Chapter 17-4 F.A.C."

13. Insert after "raw materials" the words "or chemicals processed" and insert after "office" the words "pursuant to 40 CFR 60.14."
14. After "1989" insert "or comply with F.A.C. 17-2.960(1)(e)."
15. Change S.C. 15 to read:

The No. 3 Lime Kiln shall be tested for TRS and SO₂ emissions after the new batch digester system's TRS noncondensable gas handling system has been connected to it and the system is operating properly (40 CFR 60.8). The TRS emissions test, using EPA Methods 3 and 16 or 16A pursuant to 40 CFR 60, Appendix A, shall be used to verify compliance with the TRS emission limit pursuant to 40 CFR 60.283(a)(1)(i). The SO₂ emissions test, using EPA Method 6 pursuant to 40 CFR 60, Appendix A, shall be used to establish the overall removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system. Two tests for SO₂ will be performed. There will be one test without incinerating digesting TRS gas in the kiln and one test while incinerating digesting TRS gas in the kiln. The results of these two tests will be used to rule out or require further emissions review pursuant to F.A.C. Rule 17-2.500 and to assess the appropriate processing fee pursuant to F.A.C. Rule 17-4, of which \$100.00 (less than 25 TPY potential emissions) has already been received.

16. Change S.C. 16 to read:

The No. 3 Lime Kiln permit, No. AC 16-095614, or any succeeding permit shall provide for the incineration of the TRS emissions from the new batch digester system.

Mr. Bill Thomas
February 12, 1988
Page Five

The permittee of AC 16-095614, or any succeeding permit shall insure that the above provision is incorporated in that permit prior to the final compliance date.

17. No change.

18. No change.

This completes the written comments which are based on the agreements reached in the aforementioned meeting.

We sincerely appreciate the cooperation from you and your staff.

Jefferson Smurfit Corporation is looking forward to completion of this TRS reduction project and to improving the quality of life in Florida. Receipt of the final permit is essential for us to proceed with this project. Anything you can do to expedite the issuance of this permit will be appreciated.

If you have any questions concerning these comments, please call Mr. Jerry Cox at 353-3611 or write to me at the above address.

Sincerely,



for J. Franklin Mixson
Vice President and
General Manager
Jacksonville Mill

JFM:slt

1116/044/TC-C

cc: K. Mehta, BESD

Copied: Bruce Mitchell
Pradeep Ravi
Max Linn
CHF/BT

2.15.88 (m)

ATTACHMENT 9

no envelope
TOPM

Full copy

**DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES**
Bio-Environmental Services Division
Air and Water Pollution Control



DER
FEB 19, 1988
BAQM

February 12, 1988

Mr. Bill Thomas, P.E.
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blainstone Road
Tallahassee, FL 32301

**Re: Jefferson Smurfit Corporation, Jacksonville, FL
New Batch Digester System
Proposed Permit No. AC16-141869**

Dear Mr. Thomas:

The BESD has reviewed the captioned item and has determined it to be complete. The Central Air Permitting Staff is to be congratulated in the preparation of a very important permit in a restricted time frame.

If BESD may be of further assistance in this matter, please advise.

Very truly yours,

Jerry E. Woosley
Air Pollution Control Engineer

JEW/mh

cc: BESD File 1010
Mr. Bill Stewart, P.E., DER

disc 4mh/21

Copied Bruce Mitchell
Pradeep Raval } 2.22.88 (m)
CHF/BT



State of Florida
Department of Environmental Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Jefferson Smurfit Corporation to construct a new batch digester system consisting of five 6200 cu. ft. digesters with an automated operation system, associated Blow Tank/Blow Heat Condensing System, and Turpentine Recovery System. An associated noncondensable gas handling system will be installed to collect and transport all of the new batch digester system's TRS emissions to the No. 3 Lime Kiln, where the gases will be incinerated. The design daily pulp production rate will be 1250 TPD ADP (tons per day of air dried pulp). The location of the project will be at Jefferson Smurfit's existing facility in Jacksonville, Duval County, Florida. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination. changed from "maximum"

deleted "attached"

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application 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:

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

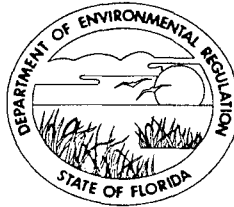
Department of Health Welfare and Bio-
Environmental Services
515 West 6th Street
Jacksonville, Florida 32206-4397

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Bruce

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY

January 25, 1988

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. J. Franklin Mixson
Jefferson Smurfit Corporation
1915 Wigmore Street
P. O. Box 150
Jacksonville, Florida 32201

Dear Mr. Mixson:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Jefferson Smurfit Corporation to construct a new batch digester system and associated noncondensable TRS gas handling system at the existing facility in Jacksonville, Duval County, Florida.

Please submit, in writing, any comments which you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/bm

Attachments

cc: K. Mehta, BESD
B. Williams, JSC
J. Cox, JSC
D. Buff, P.E., KBN
B. Pittman, Esq., DER

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Jefferson Smurfit Corporation
1915 Wigmore Street
P. O. Box 150
Jacksonville, Florida 32201

DER File No. AC 16-141869

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Jefferson Smurfit Corporation, applied on November 12, 1987, to the Department of Environmental Regulation for a permit to construct a new batch digester system consisting of five 6200 cu. ft. digesters with an automated operation system, associated Blow Tank/Blow Heat Condensing System, and Turpentine Recovery System. An associated noncondensable gas handling system will be installed to collect and transport all of the new batch digester system's TRS emissions to the No. 3 Lime Kiln, where the gases will be incinerated. The maximum daily pulp production rate will be 1250 TPD ADP (tons per day of air dried pulp). The location of the project will be at Jefferson Smurfit's existing facility in Jacksonville, Duval County, Florida.


The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit was needed for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit applications. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30) days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copy enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

Copies furnished to:

K. Mehta, BESD
B. Williams, JSC
J. Cox, JSC
D. Buff, P.E., KBN
B. Pittman, Esq., DER

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

- (1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.
- (2) All petitions filed under these rules should contain:
 - (a) The name and address of each agency affected and each agency's file or identification number, if known;
 - (b) The name and address of the petitioner or petitioners;
 - (c) All disputed issues of material fact. If there are none, the petition must so indicate;
 - (d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;
 - (e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;
 - (f) A demand for the relief to which the petitioner deems himself entitled; and
 - (g) Such other information which the petitioner contends is material.

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Jefferson Smurfit Corporation to construct a new batch digester system consisting of five 6200 cu. ft. digesters with an automated operation system, associated Blow Tank/Blow Heat Condensing System, and Turpentine Recovery System. An associated noncondensable gas handling system will be installed to collect and transport all of the new batch digester system's TRS emissions to the No. 3 Lime Kiln, where the gases will be incinerated. The maximum daily pulp production rate will be 1250 TPD ADP (tons per day of air dried pulp). The location of the project will be at Jefferson Smurfit's existing facility in Jacksonville, Duval County, Florida. The Department is issuing this Intent to Issue for the reasons stated in the ~~attached~~ Technical Evaluation and Preliminary Determination. 2-11-88 (meeting)
PBM

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009, Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application 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:

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Health Welfare and Bio-
Environmental Services
515 West 6th Street
Jacksonville, Florida 32206-4397

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on _____.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

J. Edgar Rogers
Clerk

Date

Technical Evaluation
and
Preliminary Determination

Jefferson Smurfit Corporation
Duval County
Jacksonville, Florida

Permit Number:
AC 16-141869

Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

January 25, 1988

I. Application

A. Applicant

Jefferson Smurfit Corporation
1915 Wigmore Street
P. O. Box 150
Jacksonville, Florida 32201

B. Project Description and Location

The applicant proposes to replace the existing digester system which consists of six (6) batch digesters and associated blow tank, accumulator and turpentine condenser, with five (5) new batch digesters, new blow tank, new accumulator tank and new turpentine condenser. A further description is offered:

- o Five new 6200 cubic foot batch digesters will be installed and the six existing batch digesters will be retired from service. The new batch digesters will be equipped with automatic capping valves and all digester operations will be automated with a new distributed control system.

The equipment required for a cold blow heat recovery process will be installed. In this process most of the hot liquor in the digester at the end of the cook is displaced with cooler washer filtrate prior to blowing, resulting in a colder blowing temperature. The volume of blow gases flashed off is approximately 10% of a conventional blow heat system so the TRS containing gases are easier to collect. The hot liquor, which is displaced out of the digester, is used to preheat white liquor resulting in an energy savings.

- o A new blow tank and blow heat condensing system will be installed to replace the existing system, which is inefficient and vents considerable amounts of TRS containing blow gases to the atmosphere. The new blow heat condensing system will be sized to eliminate the TRS emissions. Non-condensable gases will be collected and incinerated in the existing No. 3 Lime Kiln. Pulp from the new blow tank will be pumped to existing screening and washing operations.

- o A new turpentine recovery system, consisting of a new gas-off separator and turpentine condensers, will be installed to replace existing equipment. Relief gases from the digester cooking operation will be condensed and transported to the existing turpentine decanter for turpentine recovery. Non-condensable gases will be collected and incinerated in the existing No. 3 Lime Kiln.

The proposed project will take place at the applicant's existing facility at 1915 Wigmore Street in Jacksonville, Duval County, Florida. The UTM coordinates are Zone 17, 439.8 km East and 3359.4 km North.

The Standard Industrial Codes are:

Major Group 26: Paper and Allied Products; Industry Group No. 262; Industry No. 2621: Paper Mills

The Standard Classification Codes are:

Pulp and Paper Industry:

Major Group 26 : Sulfate (Kraft) Pulping

- o Digester Relief and Blow Tank 3-07-001-01 (tons ADUP)
- o Turpentine Condenser 3-07-001-07 (tons ADUP)
- o Accumulator 3-07-001-99 (tons ADUP)

C. Process and Controls

The batch digester system pressure cooks wood chips (685,257 lbs/hr) with a white liquor (501,265 lbs/hr) to yield products of 178,167 lbs/hr air dried pulp (ADP), 234,608 lbs/hr black liquor solids (BLS), and 706 lbs/hr turpentine.

The gaseous pollutant emissions of total reduced sulfur (TRS) produced by the proposed new batch digester system, as defined by 40 CFR 60.282(d), will be collected and transported by a noncondensable gas (NCG) handling system to the No. 3 Lime Kiln, where they will be incinerated and oxidized to sulfur dioxide (SO₂).

The applicant assumes that the majority, if not all, of the SO₂ emissions will be removed in the No. 3 Lime Kiln, while processing lime mud, and by further treating the flue gas in the associated wet scrubber system.

2-11-88 pen

compliance with TRS emission limits

Since the No. 3 Lime Kiln has already been tested for TRS and SO₂ emissions pursuant to AC 16-095614, a compliance test for TRS and SO₂ emissions will be required after connecting the NCG system to the No. 3 Lime Kiln to verify total destruction of the TRS gases and to establish the overall SO₂ removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system.

II. Rule Applicability

The proposed project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code (FAC) Rules 17-2 and 17-4.

The application package was deemed complete on January 11, 1988.

Duval County is designated unclassifiable for the pollutant SO₂ according to FAC Rule 17-2.430.

The existing mill is a major emitting facility in accordance with FAC Rule 17-2.100(111) for the pollutant SO₂.

The new batch digester system has the potential to emit TRS emissions and, after incineration in a combustion source, SO₂ emissions.

The applicant assumes that there will not be any TRS potential emissions from the new batch digester system, since the emissions will be incinerated in the No. 3 Lime Kiln. Therefore, destruction of the TRS emissions will have to be demonstrated to verify that there is not an increase in TRS emissions from the No. 3 Lime Kiln. Tests using EPA Methods 3 and 16 according to 40 CFR 60, Appendix A, shall be performed. Since a TRS emissions test was required for AC 16-095614, the results of the two tests are to be compared to validate the applicant's assumption and to rule out further review of the emissions pursuant to FAC Rule 17-2.500, PSD. Look at their language.

2-11-88 pen

The applicant assumes that there will not be an increase in SO₂ potential emissions, since the lime kiln, while processing lime mud, and its associated wet scrubber system are both excellent scrubbing mediums for SO₂. Therefore, a compliance test for SO₂ using EPA Method 6 according to 40 CFR 60, Appendix A, shall be required after connecting the new batch digester system's TRS NCG system to the No. 3 Lime Kiln and is operating

✓ this language
2-11-88
PDR

properly (40 CFR 60.8). Since a SO₂ emissions test was required for AC 16-095614, the results of the two tests are to be compared to establish the overall SO₂ removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system and to rule out further review of the emissions pursuant to FAC Rule 17-2.500, PSD.

Since the applicant proposes to increase the process raw materials and chemicals by the installation of a new batch digester system over the existing system, the following table will exhibit the projected uncontrolled annual emissions:

Table 1

Source	Projected Uncontrolled Emissions (TPY)	
	TRS	SO ₂
New Batch Digester System	2395	4503
Existing Batch Digester System	<u>1470</u>	<u>2764</u>
Net:	+925	+1739

- Note:
- o TRS emissions are based on 10.5 lbs/ton ADP; new: 456,250 tons ADP; existing: 280,000 tons ADP (1987)
 - o SO₂ emissions are 1.88 times the TRS emissions
 - o 8760 hours per year operation assumed

Based on Table 3 in AC 16-095614, PSD tracking for SO₂ emissions are established at +9.6 TPY. Any net change in SO₂ emissions of +30.4 TPY will trigger new source review pursuant to FAC Rule 17-2.500(5). Therefore, if there is any increase in SO₂ emissions from the No. 3 Lime Kiln established by the post test, the emissions will have to be reviewed, with the total emissions separated into those associated with the increase in production and those that are associated with complying with the TRS rule. Based on Table 1, the net increase in uncontrolled SO₂ emissions is approximately 39% of the total projected. Consequently, the net change in SO₂ emissions, if any, between the pre and post tests, shall be prorated accordingly and further rule review pursuant to FAC Rule 17-2.500 shall be based on the results of the emissions assessment.

2-11-88
PDR

Since the applicant assumes and projects that there will be no increase in TRS potential emissions, the emissions are exempt from review pursuant to FAC Rule 17-2.500, PSD, and shall be subject to review pursuant to FAC Rule 17-2.520, Sources Not Subject to PSD or Nonattainment Review. Since the applicant assumes and projects that there will not be an increase in SO₂ potential emissions and, if any, will be less than the amount necessary to require new source review (+30.4 TPY) pursuant to FAC Rule 17-2.500(5), the emissions are subject to review pursuant to FAC Rule 17-2.520. Therefore, the proposed new batch digester system will be considered a minor modification to an existing major facility not subject to review pursuant to FAC Rule 17-2.500, PSD, unless initial compliance tests for TRS and SO₂ prove otherwise.

The new batch digester system is subject to FAC Rule 17-2.660, which includes the adoption of the Standards of Performance for Kraft Pulp Mills, 40 CFR 60, Subpart BB. The source is subject to the provisions of 40 CFR 60.280, 40 CFR 60.281, 40 CFR 60.283, 40 CFR 60.284, and 40 CFR 60.285.

The applicant selected to incinerate the new batch digester system's TRS emissions in accordance with 40 CFR 60.283(a)(1)(i). Therefore, the new batch digester system's TRS emissions are subject to the provisions of 40 CFR 60.283(l)(a)(5), which prohibits the No. 3 Lime Kiln from emitting any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen (0.78 lb/hr and 3.39 TPY when liquid fossil is burned; 0.80 lb/hr and 3.49 TPY when gaseous fossil fuel is burned; see (AC 16-095614)).

Monitoring of emissions and operations shall be in accordance with 40 CFR 60.284 and FAC Rule 17-2.710(4).

Test methods and procedures shall be in accordance with 40 CFR 60.285. The initial compliance test shall be conducted in accordance with 40 CFR 60.8.

According to FAC Rule 17-2.960(1)(d)1.b., the proposed new batch digester system and the retirement of the existing system shall be in final compliance by May 12, 1989.

The source is subject to the provisions of FAC Rule 17-2.660(3), General Provisions.

The batch digester system and its control system are subject to the provisions of FAC Rule 17-2.600(4)(c)1.c.

Objectionable odors shall not be allowed off of the plant property pursuant to FAC Rule 17-2.620(2).

The appropriate processing fee pursuant to FAC Rule 17-4 will be established after tests are conducted for both TRS and SO₂ on the No. 3 Lime Kiln and the results are compared to test results for these pollutants conducted pursuant to AC 16-095614. Therefore, since a fee of \$100.00 (less than 25 TPY potential emissions) has been submitted, the appropriate processing fee will be based on the pre and post test result comparisons (worst case pollutant), less the \$100.00 already submitted.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

Pursuant to 40 CFR 60.283(1)(a)(i), there will not be any TRS emissions allowed, since the applicant elected to capture, transport, and incinerate all of the TRS emissions from the new proposed batch digester system. Consequently, the TRS allowable emission standard pursuant to 40 CFR 60.283(1)(a)(5) will not be changed as is established in AC 16-095614, unless warranted by pre and post test result comparisons. However, if there is a volumetric flow increase in the No. 3 Lime Kiln, thus increasing the TRS potential mass emissions, then an application along with the appropriate fee to modify the No. 3 Lime Kiln would be required.

wants it deleted all together 2-11-88 BM

The SO₂ emissions are projected to be less than the amount needed to achieve a net significant emission increase of 40 TPY. The actual SO₂ emission changes will be established by conducting a test after the new batch digester system's NCG system has been connected to the No. 3 Lime Kiln and the overall SO₂ removal efficiency will be established by comparing this test with the test performed pursuant to AC 16-095614. Therefore, the SO₂ allowable emission limit for the No. 3 Lime Kiln shall be the same as that established in AC 16-095614 (not to exceed 8.33 lbs/hr and 36.5 TPY).

02-11-88 previous language on testing BM

The emission limiting standards/limits are consistent with the applicable requirements pursuant to FAC Rules 17-2 and 17-4 and 40 CFR 60, Subpart BB, which is adopted by reference according to FAC Rule 17-2.660(2).

B. Air Quality Analysis

From a technical review of the application package and supplementary material, an air quality analysis was not required at this time.

IV. Conclusions

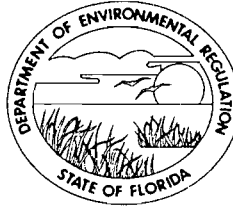
Final review of the emissions of TRS and SO₂ pursuant to FAC Rule 17-2.500 has not been concluded, since emission tests will be required after connecting the TRS NCG system associated with the new batch digester system to the No. 3 Lime Kiln and is operating properly (40 CFR 60.8). The test results are to be compared to previous test results established pursuant to AC 16-095614. If there is no net significant pollutant increase associated with the increase in process through-put of raw materials and chemicals over the established present operating levels, no further review pursuant to FAC Rule 17-2.500 will be required.

Based on the test comparisons, the permit shall be amended to reflect any potential pollutant emission changes associated with PSD tracking pursuant to FAC Rule 17-2.500.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all applicable requirements of FAC Rules 17-2 and 17-4, and the Standards of Performance for Kraft Pulp Mills, 40 CFR 60, Subpart BB.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
Jefferson Smurfit Corp.
1915 Wigmore Street
P. O. Box 150
Jacksonville, FL 32201

Permit Number: AC 16-141869
Expiration Date: August 10, 1989
County: Duval
Latitude/Longitude: 30° 22' 00"N/
81° 37' 30" W
Project: Batch Digester System

*change to
180 + 90
from M-12, 1990
Feb 12, 1990*

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of five 6200 cu. ft. digesters, associated Blow Tank/Blow Heat Condensing System and Turpentine Recovery System, and associated TRS noncondensable gas handling system. The maximum daily pulp production will be 1250 TPD ADP (tons per day of air dried pulp). The location of the project will be at Jefferson Smurfit Corporation's existing facility in Jacksonville, Duval County, Florida. The UTM coordinates are Zone 17, 439.8 km East and 3359.4 km North.

The Standard Industrial Codes are: Industry No. 2621-Paper Mills
The Standard Classification Codes are: Pulp & Paper Industry
Major Group 26: Sulfate (Kraft) Pulping
o Digester Relief & Blow Tank 3-07-001-01
o Turpentine Condenser 3-07-001-07
o Accumulator 3-07-001-99

Construction will be in accordance with the permit application, plans, documents, and reference material submitted unless otherwise stated in the General and Specific Conditions.

Attachments to be Incorporated:

1. Mr. J. Franklin Mixson's cover letter and application package dated November 9, 1987, and received November 12, 1987.
2. Mr. J. E. Woosley's letter dated/received December 10, 1987.
3. Mr. C. H. Fancy's letter dated December 11, 1987.
4. Mr. J. Franklin Mixson's letter dated January 6, 1988, and received January 11, 1988.
5. Mr. J. Franklin Mixson's letter on a petition dated January 18, 1988, and received January 19, 1988.
6. Mr. J. Franklin Mixson's letter of additional information dated January 18, 1988, and received January 19, 1988.
7. The Technical Evaluation and Preliminary Determination dated January 25, 1988.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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 does not constitute a waiver of 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.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement 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.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, 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.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

GENERAL CONDITIONS:

6. The permittee shall at all times 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.

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, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring 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.

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 notify and provide the Department with the following information:

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

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

GENERAL CONDITIONS:

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 revocation of this permit.

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 arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- () Determination of Best Available Control Technology (BACT)
- () Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

GENERAL CONDITIONS:

- b. The permittee shall retain 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), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be 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:
- the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

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 submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The project may operate continuously (i.e., 8760 hrs/yr).
2. The peak production rate shall not exceed 89.08 TPH ADP (tons per hour of air dried pulp; based on a utilization rate of 685,257 lbs/hr wood chips and 501,265 lbs/hr white liquor), 234,608 lbs/hr black liquor solids (dry), and 706 lbs/hr turpentine. The maximum daily production rate shall not exceed 1250 TPD ADP (tons per day of air dried pulp).

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

SPECIFIC CONDITIONS:

3. The permittee shall not discharge from the batch digester system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen unless the gases are combusted in the No. 3 lime kiln, from which the exhaust gases shall not contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen (in accordance with 40 CFR 60.283(a)(1) ~~and~~). *2-11-88 Per*

wants to delete 2-11-88 Per

4. For inventory and PSD tracking purposes, the TRS potential emissions from the batch digester system will be considered zero. (based on the permittee's control strategy and to be verified by conducting a verification test using EPA Methods 3 and 16 *or 16 A* according to 40 CFR 60, Appendix A). *2*

5. The batch digester system is subject to the requirements of Florida Administrative Code (FAC) Rule 17-2.660(3), General Provisions.

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6. Operation reports and records shall be in accordance with 40 CFR 60.284(d), Monitoring of Emissions and Operations, and FAC Rule 17-2.710(4), Continuous Monitoring Requirements.

7. The initial and annual compliance tests shall be conducted in accordance with 40 CFR 60.285, Test Methods and Procedures. The initial compliance test shall be in accordance with 40 CFR 60.8.

8. All process equipment shall be inspected regularly and maintained in good operating condition to minimize fugitive gaseous emissions.

Permittee

9. The project shall provide proof of compliance with FAC Rule 17-2.960(1)(d)1.b., by May 12, 1989, to the Duval County's Department of Health, Welfare and Bio-Environmental Services Division (BESD). *[add the language] 2-11-88 Per*

delete all together 2-11-88

10. The expiration date of this permit coincides with the 90 days required to process a complete application for an operating permit after the final compliance date, in accordance with FAC Rule 17-4.

11. This project shall comply with all the applicable requirements of FAC Rules 17-2 and 17-4, and 40 CFR 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

12. The BESD's office shall be notified in writing 15 days prior to source testing. Written reports of the tests shall be submitted to the BESD's office within 45 days of the test completion.

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction and achieve final compliance on schedule, the BAQM's office and the BESD's office must be notified in writing 60 days prior to the final compliance date of the construction permit and the permittee shall submit appropriate information pursuant to FAC Rule 17-2.960(1)(e).

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with compliance test results and Certificate of Completion, to the BESD's office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. [Operation beyond the construction permit expiration date requires a valid permit to operate.] (Rules 17-2 and 17-4, FAC).

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (Rule 17-4, FAC)

13. Any change in the method of operation, raw materials, equipment or operating hours shall be submitted for approval to the BESD's office and the BAQM's office, pursuant to 40 CFR 60.14.

14. The existing batch digester system shall be in final compliance (retired from service and all related permits surrendered to the Department or BESD) by May 12, 1989, or comply with FAC Rule 17-2.960(1)(c).

15. The No. 3 Lime Kiln shall be tested for TRS and SO₂ emissions after the new batch digester system's TRS noncondensable gas handling system has been connected to it and the system is operating properly (40 CFR 60.8). The TRS emissions test, using EPA Methods 3 and 16 pursuant to 40 CFR 60, Appendix A, shall be used to verify complete destruction of the pollutant. [The SO₂ emissions test, using EPA Method 6 pursuant to 40 CFR 60, Appendix A, shall be used to establish the overall removal efficiency of the No. 3 Lime Kiln and its associated wet scrubber system, by comparing the test results with previously performed tests (initial compliance test: AC 16-095614). The results of the two tests and their comparisons to previous tests will be used to rule out or require further emissions review pursuant to FAC Rule 17-2.500 and to assess the appropriate processing fee pursuant to FAC Rule 17-4, of which \$100.00 (less than 25 TPY potential emissions) has already been received.]

PERMITTEE:
Jefferson Smurfit Corp.

Permit Number: AC 16-141869
Expiration Date: August 10, 1989

16. The No. 3 Lime Kiln's permit, No. AC 16-095614, shall be amended to reflect the intent of this permit and to identify that it will be receiving TRS emissions from the new batch digester system. The permittee of AC 16-095614 shall request an amendment to that permit at least 90 days prior to the final compliance date of May 12, 1989.

17. The batch digester system and its control system are subject to the provisions of FAC Rule 17-2.600(4)(c)1.c.

18. Objectionable odors shall not be allowed off of the plant property pursuant to FAC Rule 17-2.620(2).

Issued this _____ day of _____,
19__.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtman, Secretary

ATTACHMENT 1

Available Upon Request.

8.

ATTACHMENT 2

3

4

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

December 10, 1987



Mr. Claire Fancy, P.E.,
Department of Environmental Regulation
2600 Blair Stone Road
Twin Towers Office Bldg.
Tallahassee, Florida 32077

DER
DEC 10 1987
BAQM

Re: Jefferson Smurfit Corporation
TRS Construction Permit Applications

Dear Mr. Fancy:

Bio-Environmental Services Division (BESD) provides the following comments on the captioned permit applications:

Smelt Dissolving Tank

Section III A

Does the given smelt process weight (96,240 lbs/hr) correspond to the recovery boiler process weight (137,500 lbs/hr black liquor solids) or the previous recovery boiler process weight (120,000 lbs/hr black liquor solids)?

The applicable rule for the SDT particulate matter emissions is 17-2.650(2)(c)10., Florida Administrative Code (FAC). The same rule is applicable for visible emissions.

It is noted that the requested particulate matter emission rate is significantly lower than the rate which is derived using the equation found in the referenced rule. If Jefferson Smurfit Corporation (JSC) desires a lower particulate matter limit it must be understood that the limit cannot be increased at a later date without a modification permit. The potential emissions should be reported as uncontrolled emissions in accordance with the permit application procedures.

Recovery Boiler

Section III A

At what percent moisture are the black liquor solids fired? What is dry?

Section III C

It is noted that the allowable particulate matter emission rate calculated using the correct standard (3 lbs/3000 lbs black liquor solids fired) is 137.5 lbs/hr. based upon the requested operating rate. If JSC desires a lower particulate matter limit it must be understood that the limit cannot be increased at a later date without a modification permit. The potential emissions should be reported as uncontrolled emissions in accordance with the permit application procedures.



Section III E

Are black liquor and fuel oil fired simultaneously at the given rates?

Digester System

Attachment B, Section I A and B

Do the figures in A represent the maximum hourly capacity and the figures in B the maximum hourly average based on maximum daily input? This item should be clearly explained.

General Comments

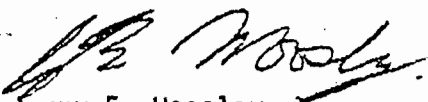
The construction permit applications definitely request higher operating capacities than are currently permitted. In accordance with the agreement reached in the November 4, 1987 meeting in Tallahassee (concerning the permit applications), testing for demonstrating highest existing capacity of a unit should be performed at a minimum of 96% of the maximum capacity. This testing is essential in establishing the actual capacities of the units. It is strongly urged that testing at these rates be done prior to issuance of any construction permit.

It is noted from the literature provided that the modifications proposed for the Recovery Boiler will allow increases in production capacity through increased efficiency and higher furnace operating rates. This literature further supports the need for establishing the maximum capacities of the units at this time.

In addition to the capacity increase the literature indicates a prime environmental benefit of a significant reduction in furnace generated TRS (below 3 ppm). This modification coupled with the recently installed molecular oxygen system on the black liquor oxidation system should allow JSC to consistently maintain TRS emissions at or below the 5 ppm level. In furtherance of a good faith effort by JSC and an opportunity to reduce allowable TRS emissions by an additional 70 tons per year it is requested that the JSC agree to the 5 ppm emission limit in the construction permit. The technology review presented in the permit application appears to make this option feasible.

If BESD may be of further assistance in this matter, please advise.

Very truly yours,



Jerry E. Woosley
Associate Pollution Control Engineer

JEW/ecr

cc: Mr. Bill Stewart, P.E., DER
Mr. Gene Tonn, P.E., JSC
BESD 1010 A
Disc 1, 46

ATTACHMENT 3

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY

December 11, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. Franklin Mixson
V.P. and General Manager
Jefferson Smurfit Corporation
1915 Wigmore Street
P. O. Box 150
Jacksonville, Florida 32201

Dear Mr. Mixson:

Re: Completeness Review for Application to Construct
Permit Nos. AC 16-141868, -141869 and -141870

The Department received your cover letter dated November 9, 1987, and the above referenced application packages on November 12, 1987. Based on a review of these application packages, they are deemed incomplete. Therefore, submit the following information, including all reference material, calculations and assumptions, to the Department's Bureau of Air Quality Management (BAQM) office so their status can, again, be ascertained:

AC 16-141869: Batch Digester System

1. Is it the intent of Jefferson Smurfit Corporation (JSC) to request an increase in the total process input rate for the new batch digester system above the demonstrated (contemporaneous) rate for the existing batch digester system?
2. If the answer to No. 1 above is yes, please calculate and submit the net emission changes in the pollutants between the existing and proposed new batch digester systems. If the net emission change of any pollutant is greater than the net significant emission rate contained in Florida Administrative Code (FAC) Rule 17-2 Table 500-2, submit an amended application pursuant to FAC Rule 17-2.500(5), New Source Review for Prevention of Significant Deterioration (PSD).
3. Referencing No. 2 above, calculate and submit the total process input rate and associated pollutant emissions for all affected sources at the mill due to the proposed increase in total process input rate in the proposed new batch digester

system. If any of these sources are capable of accommodating a higher level of process input rate through federally enforceable permitted conditions, please document. If not, please submit an application with the appropriate fee for each affected source to the DER's BAQM office for a modification pursuant to FAC Rule 17-2.500, PSD, or FAC Rule 17-2.510, Nonattainment Area Review, depending on the affected pollutant.

4. Since September 24, 1976, has there been any physical change or change in the method of operation of the existing batch digester system? If so, please document and describe the nature of the change(s) and their associated cost(s).
5. Please submit an ambient air quality standards (AAQS) analysis and a PSD maximum concentration increase (increment) analysis for all pollutants which have a facility-wide PSD significant net emissions increase. These analyses should be sufficient to give the Department reasonable assurance that the net emissions increase will not cause or contribute to any AAQS or increments violation.
6. If the answer to No. 1 is no, please submit an amended permit application to reflect the maximum desired level of operational rates that you want reviewed. Also, calculate the potential pollutant emissions that will be emitted at this level.
7. Because the potential pollutant emissions for SO₂ is greater than 100 TPY, the appropriate fee is \$1000.00. Therefore, submit the deficient amount of \$900.00 to the Department.

AC 16-141868 and -141870: No. 9 Recovery Boiler (RB) and Smelt Dissolving Tank (SDT)

1. Are the increased raw material and chemical through-put rates requested due to the rates requested for the proposed new batch digester system?
2. If JSC intends to permit the proposed new batch digester system at the mill's present level of operation and this would alter the raw material and chemical through-put rates for the No. 9 RB and SDT, then please amend each source's application and calculate the potential pollutant emissions at this level.
3. Will the requested levels of increased raw material and chemical through-put rates for the proposed new batch digester system require an increase in raw material and chemical through-put rates in the existing multiple effect

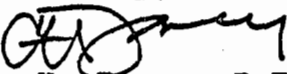
Mr. J. Franklin Mixson
Page Three
December 11, 1987

evaporator (MEE) system and its pollutant emissions (TRS/SO₂)? If so, please explain and submit the changes requested. If the MEE system requires a permit modification, please submit an application along with the appropriate fee to the DER's BAQM office.

4. Since September 24, 1976, has there been any physical change or change in the method of operation for these sources? If so, please document and describe the nature of the change(s) and their associated cost(s).
5. Has the No. 9 RB and/or SDT ever been tested at the proposed maximum raw material and chemical through-put rates? If so, please submit the test results.
6. In its existing state and without the proposed alterations, are the No. 9 RB and/or SDT capable of accommodating the proposed increased raw material and chemical through-put rates? If not, please explain.
7. Please address all of the concerns listed in the attached letter from the Duval County Bio-Environmental Services Division office. If there are any repetitive questions, please just provide the one answer and acknowledge the citing in your response.

If there are any questions, please call Bruce Mitchell, Pradeep Raval or Max Linn, at (904)488-1344, or write to me at the above address.

Sincerely,


C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/BM/s

Attachment

cc: K. Mehta, BESD
B. Pittman, Esq.
J. Cox, JSC
B. Williams, JSC
D. Buff, P.E., KBN

ATTACHMENT

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

December 10, 1987



Mr. Claire Fancy, P.E.,
Department of Environmental Regulation
2600 Blair Stone Road
Twin Towers Office Bldg.
Tallahassee, Florida 32077

DER
DEC 10 1987
BAQM

Re: Jefferson Smurfit Corporation
TRS Construction Permit Applications

Dear Mr. Fancy:

Bio-Environmental Services Division (BESD) provides the following comments on the captioned permit applications:

Smelt Dissolving Tank

Section III A

Does the given smelt process weight (96,240 lbs/hr) correspond to the recovery boiler process weight (137,500 lbs/hr black liquor solids) or the previous recovery boiler process weight (120,000 lbs/hr black liquor solids)?

The applicable rule for the SDT particulate matter emissions is 17-2.650(2)(c)10., Florida Administrative Code (FAC). The same rule is applicable for visible emissions.

It is noted that the requested particulate matter emission rate is significantly lower than the rate which is derived using the equation found in the referenced rule. If Jefferson Smurfit Corporation (JSC) desires a lower particulate matter limit it must be understood that the limit cannot be increased at a later date without a modification permit. The potential emissions should be reported as uncontrolled emissions in accordance with the permit application procedures.

Recovery Boiler

Section III A

At what percent moisture are the black liquor solids fired? What is dry?

Section III C

It is noted that the allowable particulate matter emission rate calculated using the correct standard (3 lbs/3000 lbs black liquor solids fired) is 137.5 lbs/hr. based upon the requested operating rate. If JSC desires a lower particulate matter limit it must be understood that the limit cannot be increased at a later date without a modification permit. The potential emissions should be reported as uncontrolled emissions in accordance with the permit application procedures.



Section III E

Are black liquor and fuel oil fired simultaneously at the given rates?

Digester System

Attachment B, Section I A and B

Do the figures in A represent the maximum hourly capacity and the figures in B the maximum hourly average based on maximum daily input? This item should be clearly explained.

General Comments

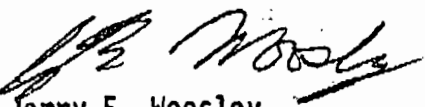
The construction permit applications definitely request higher operating capacities than are currently permitted. In accordance with the agreement reached in the November 4, 1987 meeting in Tallahassee (concerning the permit applications), testing for demonstrating highest existing capacity of a unit should be performed at a minimum of 96% of the maximum capacity. This testing is essential in establishing the actual capacities of the units. It is strongly urged that testing at these rates be done prior to issuance of any construction permit.

It is noted from the literature provided that the modifications proposed for the Recovery Boiler will allow increases in production capacity through increased efficiency and higher furnace operating rates. This literature further supports the need for establishing the maximum capacities of the units at this time.

In addition to the capacity increase the literature indicates a prime environmental benefit of a significant reduction in furnace generated TRS (below 3 ppm). This modification coupled with the recently installed molecular oxygen system on the black liquor oxidation system should allow JSC to consistently maintain TRS emissions at or below the 5 ppm level. In furtherance of a good faith effort by JSC and an opportunity to reduce allowable TRS emissions by an additional 70 tons per year it is requested that the JSC agree to the 5 ppm emission limit in the construction permit. The technology review presented in the permit application appears to make this option feasible.

If BESD may be of further assistance in this matter, please advise.

Very truly yours,

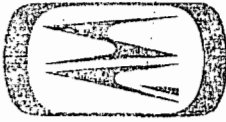


Jerry E. Woosley
Associate Pollution Control Engineer

JEW/ecr

cc: Mr. Bill Stewart, P.E., DER
Mr. Gene Tonn, P.E., JSC
BESD 1010 A
Disc 1, 46

ATTACHMENT 4



8 Jan 1988
Jou. Jr

JEFFERSON SMURFIT CORPORATION

401 ALTON STREET, P.O. BOX 276
ALTON, ILLINOIS 62002-2276

618/463-6000

January 6, 1988

CERTIFIED - RETURN RECEIPT REQUESTED

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reply to: **Containerboard Mill Division**

1915 WIGMORE STREET

P.O. BOX 150

JACKSONVILLE, FL 32201

TELEPHONE: 904/336-3611

DER

JAN 11

BAQM

RE: Completeness Review for Application to Construct New Digesting System
Permit No. AC16-141869

Dear Mr. Fancy:

The purpose of this letter is to respond to the request for additional information regarding the subject permit, as detailed in your letter of December 11, 1987. Provided below is the response to each question in your letter.

AC16-141869: Batch Digester System

1. Yes.

2. The only pollutant emitted from the existing batch digester system which is quantifiable is total reduced sulfur (TRS). TRS emissions from the existing system were quantified in the application for an interim operating permit already filed with the Florida Department of Environmental Regulation (FDER) and the Jacksonville Bio-Environmental Services Division (JBES). The interim application estimated TRS emissions from the batch digester system to be 10.5 lb/ton ADP, or 476 lb/hr based upon 1087 TPD ADP. Actual pulp production at JSC over the last year was approximately 280,000 tons ADP. Actual annual TRS emissions from the existing system are therefore calculated as :

$$280,000 \text{ tons/yr} \times 10.5 \text{ lb/ton} / 2,000 \text{ lb/ton} = 1470 \text{ tons/yr}$$

TRS emissions from the proposed new batch digester system will be incinerated in the No. 3 Lime Kiln. The No. 3 Lime Kiln is an NSPS source, and allowable emissions will not increase from the kiln as a result of incinerating TRS gases from the new digester system in the kiln. Therefore, there will be a net decrease in TRS emissions due to the replacement of the existing digester system with the new system. The decrease is approximately 1,470 tons/yr of TRS.

C. H. Fancy
January 6, 1988
Page 2

3. All other air pollutant emitting sources at the JSC mill have operating permits which limit the operating rate and air emissions from those sources. These sources will continue to operate within the limits of their respective permits after the new digester system begins operating. If any specific source requires a permit modification due to the new digester system, an appropriate permit application will be submitted to the FDER. It is noted that "modification" as defined in FAC Rule 17-2,100(118) does not include an increase in the operating hours or in the production rate of a source unless such change would be prohibited under any enforceable permit condition which was established after January 6, 1975. As a result, increases or decreases in emissions due to such changes are not considered in determining if a facility-wide net increase in emissions has occurred. Only "major modification" are subject to the PSD and nonattainment new source review rules.

This is a source specific permit application for TRS. The FDER has refused to issue facility-wide permits for TRS sources, and has insisted upon source specific permits.

4. The new digesting system permit application is for an NSPS source and is not a request for a modification to an existing source. The new digesting system is replacing the existing system; therefore, the request for information in question 4 is not relevant.

5. As discussed in the response to Questions 2 and 3 above, there will be no facility-wide net increase in pollutant emissions resulting from the operation of the new batch digesting system.

6. Not Applicable.

7. The new digesting system will not have any SO₂ emissions; therefore, the request for additional fee is inappropriate.

Provided below is the response to the question concerning the digester system, which was submitted to you by letter of December 10, 1987, by the Bio-Environmental Services Division.

ANSWER:

The figures in A represent the wood chips and white liquor required to produce the peak rate of air dried tons of pulp per hour. The figures in B represent the wood chips and white liquor required to produce the maximum daily rate of air dried tons of pulp per hour.

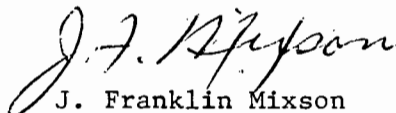
C. H. Fancy
January 6, 1988
Page 3

JSC requests that you expeditiously complete your review and issue the permit in order that construction of this project may begin.

We trust that this response completes the application for this source, in order to expedite this permit review, if any further clarification to this application is necessary please contact Jerry Cox or Gene Tonn at (904) 353-3611 as soon as possible.

JSC representatives will be available to meet with you at your convenience to expedite permit issuance.

Very truly yours,


J. Franklin Mixson
Vice President - G.M.

JFM/nml

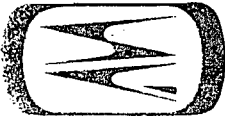
cc: Khurshid Mehta, P.E.
Jacksonville BESD

Copied: CHF|BT
Bruce Mitchell }
Pradeep Raval } 1.12.88
Betsey Pittman }

ATTACHMENT 5

ATTACHMENT 6

1-19-88



JEFFERSON SMURFIT CORPORATION

401 ALTON STREET, P.O. BOX 276
ALTON, ILLINOIS 62002-2276

618/463-6000

DER

JAN 19 1988

BAQM

DER

JAN 15

BAQM

January 18, 1988

FEDERAL EXPRESS

Reply to: **Containerboard Mill Division**

1915 WIGMORE STREET
P.O. BOX 150
JACKSONVILLE, FL 32201
TELEPHONE: 904/353-3611

Mr. Dale Twachtmann, P.E.
Secretary
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Motion for Additional Time to Petition for a Hearing on Permit
Application AC16-141869 for a Digester System.

Dear Secretary Twachtmann:

Jefferson Smurfit Corporation furnished additional information to the Department on the proposed digester system and has discussed the issues with Mr. Bruce Mitchell in the Central Air Permitting Section. Based on Mr. Mitchell's assurance that the additional information will complete the application as of January 19, 1988, Jefferson Smurfit Corporation withdraws its request for additional time to petition for a formal hearing on permit application AC16-141869.

The petition was filed on December 22, 1987 and was for three permit applications. Jefferson Smurfit Corporation withdraws only the Digester System from this request and wishes to maintain at this time its request on the other two sources, No. 9 Recovery Boiler AC16-141868 and Smelt Dissolving Tank AC16-141870.

We are confident that these two proposed project permit applications will be amicably resolved in a similar matter as with the digester system. If a resolution is reached with the Department, Jefferson Smurfit Corporation will withdraw its request on these two sources at that time.

Sincerely yours,

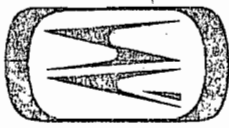
J. Franklin Mixson
V.P. and General Manager
Jacksonville Mill

JFM/nml

cc: Dan Thompson-OGC-DER
Bruce Mitchell-CAPS-DER ✓

ATTACHMENT 7

1-19-88



JEFFERSON SMURFIT CORPORATION

401 ALTON STREET, P.O. BOX 276
ALTON, ILLINOIS 62002-2276

618/463-6000

DER

JAN 19 1988

BAQM

January 18, 1988

DER

JAN 19 1988

BAQM

FEDERAL EXPRESS

Reply to: **Containerboard Mill Division**

1915 WIGMORE STREET
P.O. BOX 150
JACKSONVILLE, FL 32201
TELEPHONE: 904/353-3611

Mr. C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Completeness Review for Application to Construct New Digesting System
Permit No. AC16-141869

Dear Mr. Fancy:

In addition to the response submitted to you by letter of January 6, 1988 regarding the subject permit, provided below is a response to question number 4 for the batch digester system of your letter of December 11, 1987.

4. No.

We trust that this response completes the application for this source. In order to expedite the permit review, if further information is required please contact Jerry Cox or Gene Tonn at 904/353-3611.

Very truly yours,

J. Franklin Mixson
J. Franklin Mixson
V.P. and General Manager
Jacksonville Mill

JFM/nml

cc: Khurshid Mehta, P.E.
Jacksonville BESD

Bruce Mitchell-CAPS-DER



JEFFERSON SMURFIT CORPORATION

401 ALTON STREET, P.O. BOX 276
ALTON, ILLINOIS 62002-2276

618/463-6000

Receipt # 76196
✓ # 142146
\$100.00
AC 16-141869

DER

NOV 12 1987

BAQM

Reply to: **Containerboard Mill Division**

1915 WIGMORE STREET
P.O. BOX 150
JACKSONVILLE, FL 32201
TELEPHONE: 904/353-3611

November 9, 1987

Federal Express

Mr. Stephen Smallwood, P.E.
Chief, Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301-86317

Subject: Air Construction Permit Application
Total Reduced Sulfur Emission
Digester System
Jefferson Smurfit Corporation
Jacksonville Mill

Dear Mr. Smallwood:

Enclosed are four copies of an Air Construction Permit Application for the digester system at the Jefferson Smurfit Corporation mill in Jacksonville. Also enclosed is the \$100 permit application fee.

The project described in this construction permit is proposed in order to achieve compliance with the Department's TRS emission regulations as found in Chapter 17-2.600(4)(C) FAC. Enclosed with this application is an overview of the Company's overall TRS compliance program for the Jacksonville mill.

In order to meet the compliance date provided by the Department's rule, a timely consideration of this application will be extremely critical.

If you have any questions, please call Jerry Cox or Gene Tonn at 904/353-3611 or write to me at the above address.

Very truly yours,

J. Franklin Mixson
J. Franklin Mixson
Vice President and
General Manager
Jacksonville Mill

JFM/mt

Enclosure

cc: Khurshid Mehta, P.E.
Jacksonville BESD

TRS COMPLIANCE PLAN
JEFFERSON SMURFIT CORPORATION
JACKSONVILLE, FLORIDA
NOVEMBER 1987

OVERVIEW
OVERALL TRS COMPLIANCE PROGRAM
JEFFERSON SMURFIT CORPORATION
JACKSONVILLE MILL

Jefferson Smurfit Corporation (JSC) of Jacksonville, Florida is proposing several changes at its existing pulp mill in order to achieve compliance with the Department of Environmental Regulation's total reduced sulfur (TRS) regulations as found in Chapter 17-2.600(4)(c)(FAC). The changes include replacement of existing equipment, addition of new equipment, and destruction of non-condensable TRS gases in an existing lime kiln. Specifically, the following changes are proposed:

- o Replacement of the existing digesting system, which consists of six (6) batch digesters and associated blow tank, accumulator and turpentine condenser, with five (5) new batch digesters, new blow tank, new accumulator tank and new turpentine condenser. Non-condensable TRS gases from these sources will be collected and incinerated in the existing No. 3 Lime Kiln.
- o Improvements to the combustion air distribution system and liquor firing and computer aided process control in the No. 9 Recovery Boiler to achieve continuous compliance with the 17.5 ppm TRS standard.
- o Replacement of the existing water spray/demister pad on the Smelt Dissolving Tank vent with a new wet scrubber. The new wet scrubber will be designed to achieve compliance with the TRS standard for smelt dissolving tanks.

Air Construction Permit applications have been prepared for each of these sources.

Other TRS sources at the JSC mill are already in compliance with Federal and/or State TRS rules. These include the Multiple Effect Evaporator system (TRS emissions incinerated in No. 3 Lime Kiln), Black Liquor Oxidation system (TRS emissions incinerated in No. 10 Power Boiler), Brown Stock Washer system (TRS emissions incinerated in No. 10 Power Boiler), and the No. 3 Lime Kiln. An air

construction permit application for the No. 3 Lime Kiln will be submitted at a later date to reflect the incineration of non-condensable TRS gases from the new digester system. The overall TRS control program proposed by JSC is shown in the attached flow diagram (Figure 1).

JSC has previously submitted a Conceptual TRS Compliance Plan to FDER. The conceptual plan set forth a schedule of events which must be met in order to ensure compliance by the final compliance dates specified in Chapter 17-2.600(4)(c) (FAC). This schedule includes dates by which JSC must provide FDER with certification of purchase orders for major pieces of equipment. However, before purchase orders can be executed, air construction permits must be obtained from FDER. This requires FDER to complete review of the permit applications and issue construction permits by certain dates. The latest dates by which construction permits can be received and still meet the schedule set forth in the conceptual compliance plan are presented in Table 1. This date is January 12, 1988, for all sources.

Other pertinent dates set forth in the Conceptual TRS Compliance Plan are also shown in Table 1. Proof of final compliance for all sources is required by May 12, 1989. In order to allow sufficient time after May 12, 1989, to prepare and have approved air operating permits for the sources, it is requested that construction permit expiration dates be set no earlier than May 12, 1990.

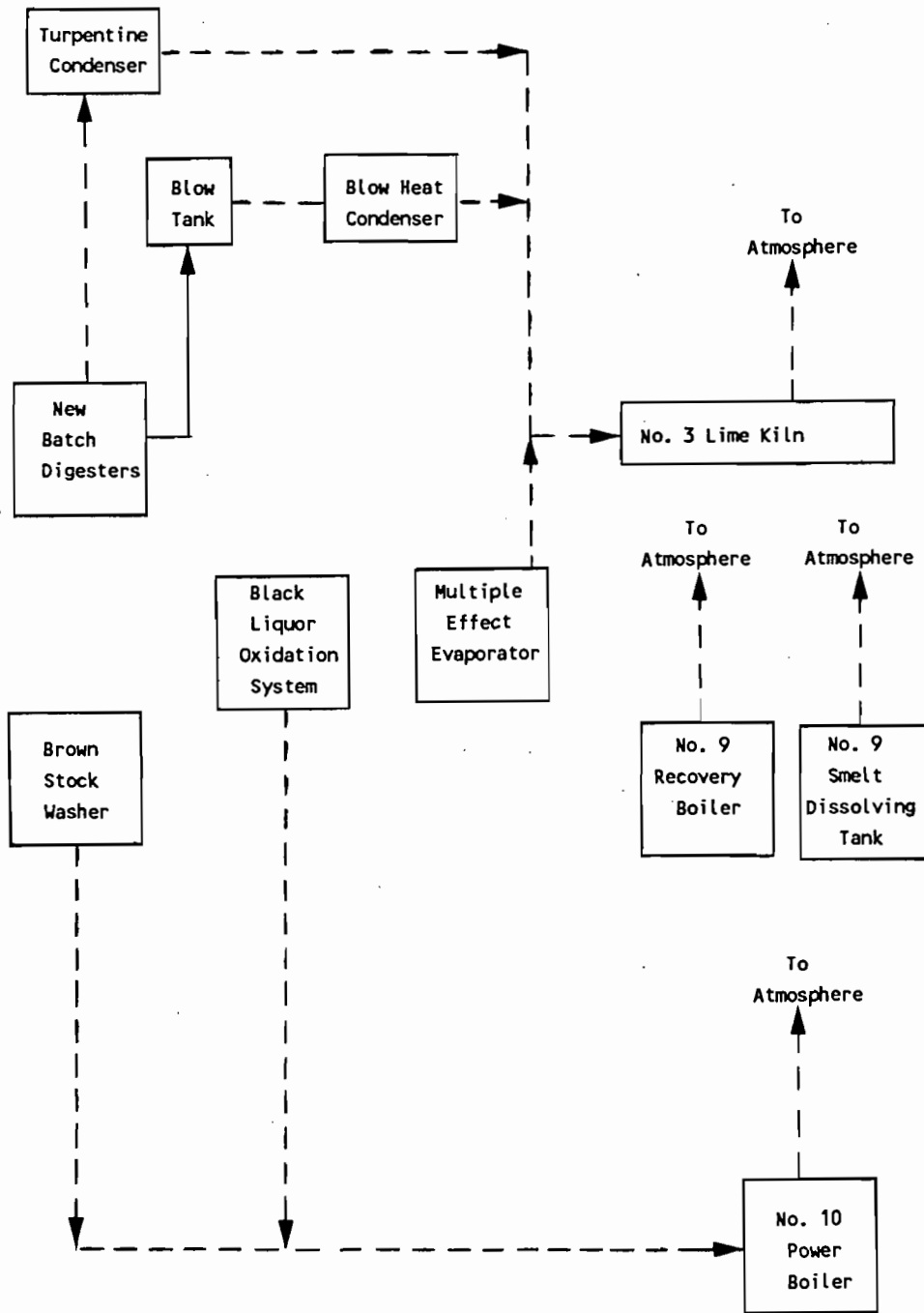


Figure 1. Overall TRS Compliance Program, Jefferson Smurfit Corporation

Table 1. Schedule for Achieving Compliance with TRS Regulations, JSC Jacksonville Mill

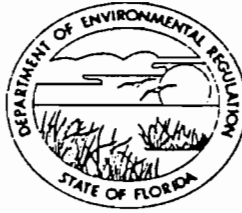
Source	Construction Permit Issued By	Certification of Equipment Order	Certification of Initial Construction	Completion of Construction	Proof of Final Compliance	Submit Operating Permit Application	Construction Permit Expiration Date
Digesting System	1/12/88	2/12/88	5/12/88	2/12/89	5/12/89	11/12/89	5/12/90
No. 9 Recovery Boiler	1/12/88	2/12/88	5/12/88	2/12/89	5/12/89	11/12/89	5/12/90
Smelt Dissolving Tank	1/12/88	2/12/88	5/12/88	2/12/89	5/12/89	11/12/89	5/12/90

DEPARTMENT OF ENVIRONMENTAL REGULATION

DER

NOV 12 1987

BAQM



APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Digester System [X] New¹ [] Existing¹

APPLICATION TYPE: [X] Construction [] Operation [] Modification

COMPANY NAME: Jefferson Smurfit Corporation COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) New Digesters 1-5

SOURCE LOCATION: Street 1915 Wigmore Street City Jacksonville

UTM: East Zone 7: 439.8 North 3359.4

Latitude 30 ° 22 ' 00 "N Longitude 81 ° 37 ' 30 "W

APPLICANT NAME AND TITLE: J. Franklin Mixson, Vice President & General Manager

APPLICANT ADDRESS: P.O. Box 150, Jacksonville, Florida 32201

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Jefferson Smurfit Corp.

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: J. F. Mixson
J. Franklin Mixson, Vice President & General
Name and Title (Please Type) Manager

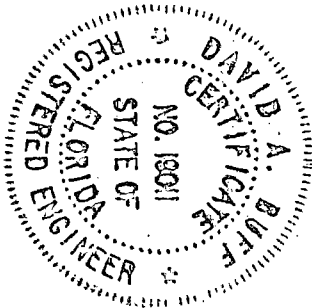
Date: 11/10/87 Telephone No. (904) 353-3611

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

¹ See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed David A. Buff

David A. Buff
Name (Please Type)

KBN Engineering and Applied Sciences, Inc.
Company Name (Please Type)

P.O. Box 14288, Gainesville, Florida 32604
Mailing Address (Please Type)

Florida Registration No. 19011 Date: 11/9/87 Telephone No. (904)375-8000

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See Attachment A

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction March 1988 Completion of Construction May 12, 1990

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

\$8,000,000

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

Not Applicable

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;
if power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions.
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? Yes
a. If yes, has "offset" been applied? No
b. If yes, has "Lowest Achievable Emission Rate" been applied? No
c. If yes, list non-attainment pollutants. ozone, PM(TSP)

2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS)
apply to this source? Yes

5. Do "National Emission Standards for Hazardous Air Pollutants"
(NESHAP) apply to this source? No

H. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? No

a. If yes, for what pollutants? _____

b. If yes, in addition to the information required in this form,
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Wood Chips			685,257	1
White Liquor			501,265	2

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 1,186,522

2. Product Weight (lbs/hr): 178,167 air dried pulp; 234,608 black liquor solids

706 lb/hr turpentine

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2	Allowable Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
TRS, as H ₂ S*	935	2,395	2.600(4)(c)1.	Incineration	935	2,395	3
	1760	7,704.8					

¹See Section V, Item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

⁴Emission, if source operated without control (See Section V, Item 3).

* TRS will be incinerated in the No. 3 Lime Kiln.

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns). (If applicable)	Basis for Efficiency (Section V Item 5)
Incineration in No. 3 Lime Kiln	TRS	+99%	NA	Incin. Design

E. Fuels Not Applicable

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average Not Applicable Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

Not Applicable

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: Not Applicable ft. Stack Diameter: _____ ft.
 Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.
 Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

Not Applicable

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume (ft) ³	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: Cyclone Wet Scrubber Afterburner
 Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
SEE ATTACHMENT B
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
SEE ATTACHMENT C
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
SEE ATTACHMENT C
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
SEE SECTION III.D.
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
SEE SECTION III.D.
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
SEE ATTACHMENT A
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
ATTACHED
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source? ^{Not Applicable}

Yes No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

Yes No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

- | | |
|---------------------------|--------------------------|
| 1. Control Device/System: | 2. Operating Principles: |
| 3. Efficiency:* | 4. Capital Costs: |

*Explain method of determining

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:¹
- d. Capital Costs:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:²
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- 1. Control Device:
- 2. Efficiency:¹
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:²
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

- a. (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

- (5) Environmental Manager:
- (6) Telephone No.:
- (7) Emissions:¹

Contaminant	Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant	Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

Not Applicable

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

Period of Monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [] Yes [] No

b. Was instrumentation calibrated in accordance with Department procedures?

[] Yes [] No [] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO ²	_____ grams/sec

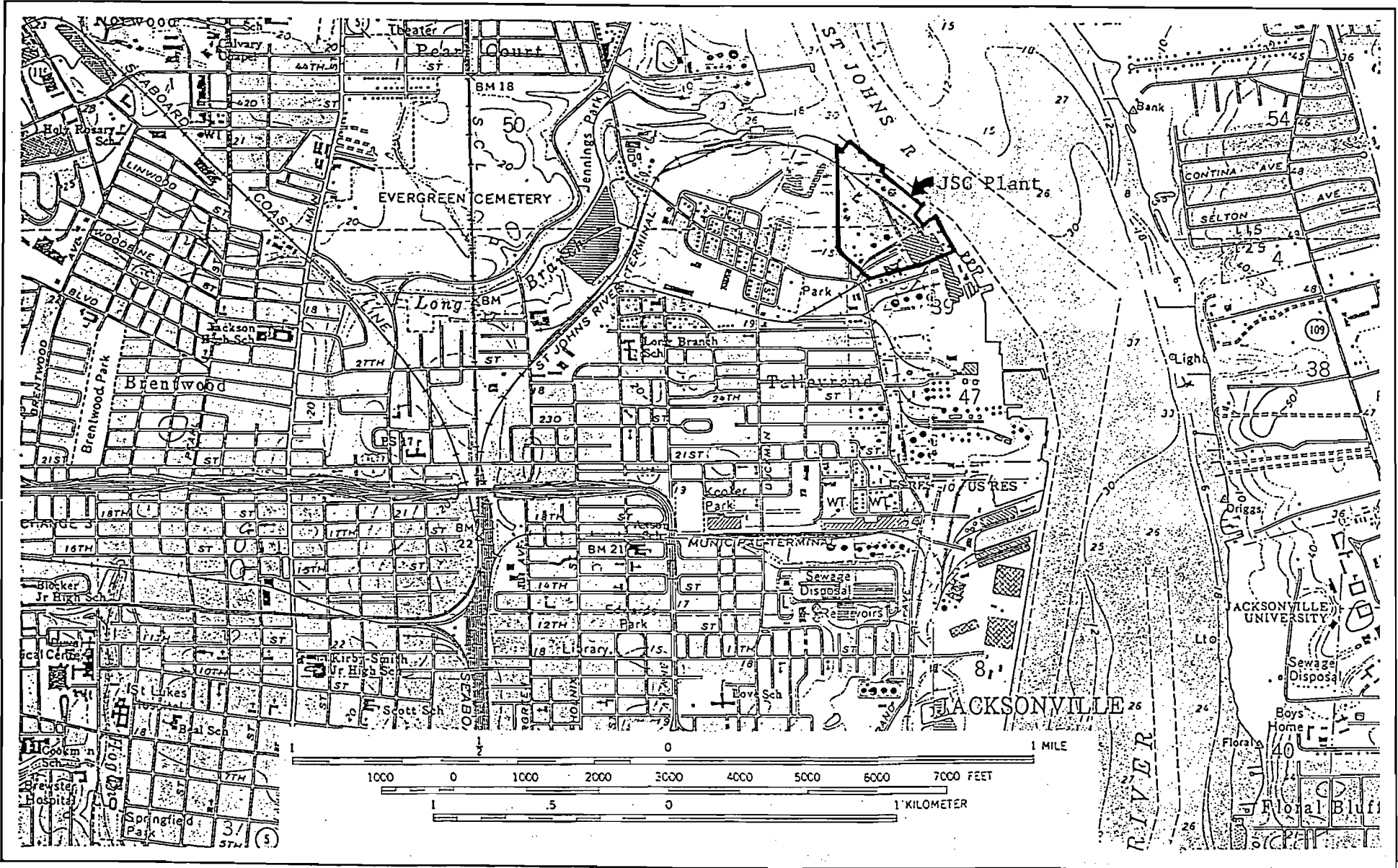
E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

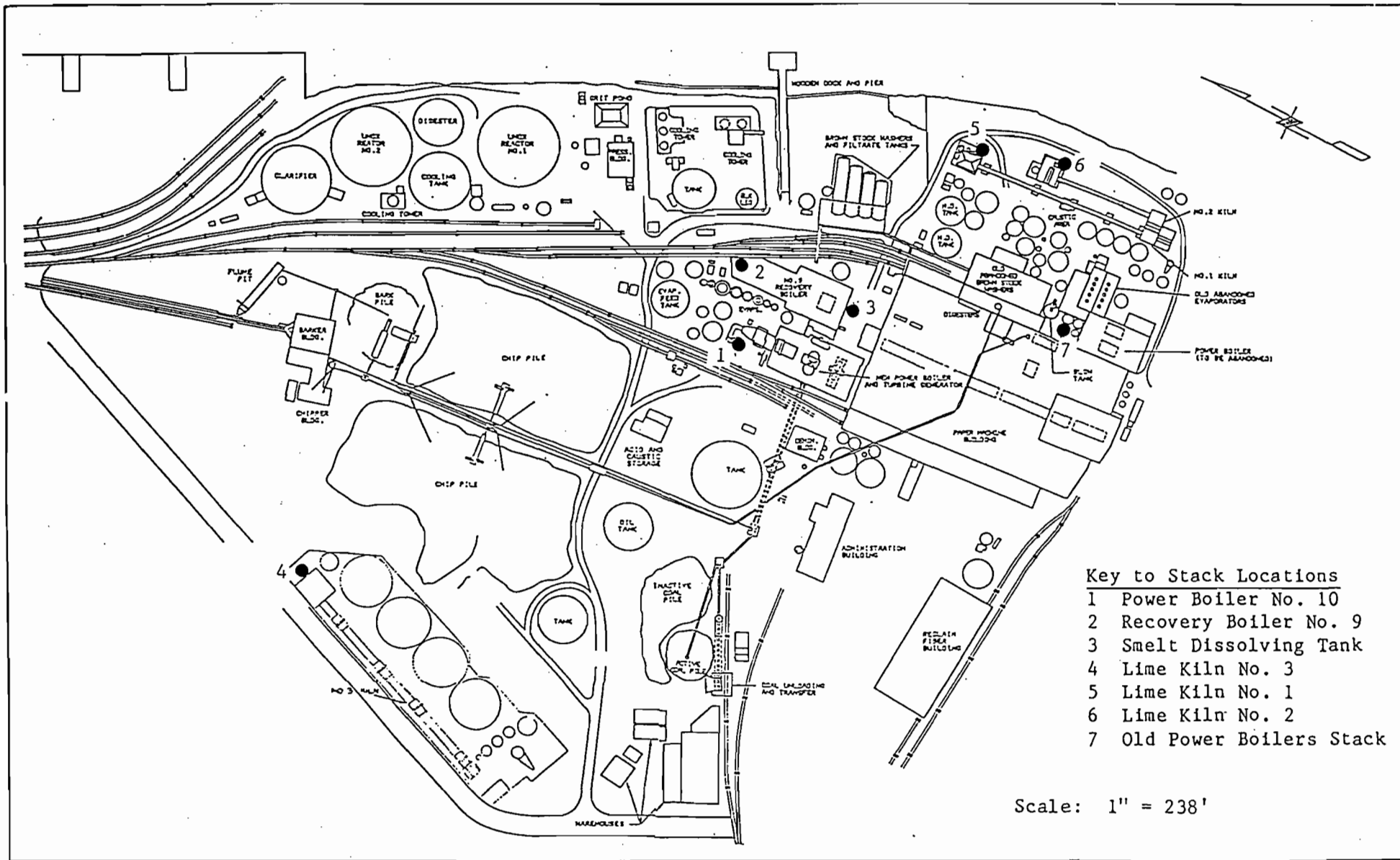
G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.



Site Location Map of Jefferson Smurfit Corporation





- Key to Stack Locations**
- 1 Power Boiler No. 10
 - 2 Recovery Boiler No. 9
 - 3 Smelt Dissolving Tank
 - 4 Lime Kiln No. 3
 - 5 Lime Kiln No. 1
 - 6 Lime Kiln No. 2
 - 7 Old Power Boilers Stack

Scale: 1" = 238'

Plot Plan of Jefferson Smurfit Facility and Stack Locations



ATTACHMENT A
PROCESS DESCRIPTION

JSC currently operates a batch digesting system at its Jacksonville plant. JSC plans to replace the existing batch digesting system with a new batch digesting system. The proposed changes, which are summarized below, will result in compliance with the State of Florida TRS regulations.

- * New Batch Digesters--Five new 6200 cubic foot digesters will be installed and the existing digesters will be taken out of service. The new digesters will be equipped with automatic capping valves and all digester operations will be automated with a new distributed control system.

The equipment required for a cold blow heat recovery process will be installed. In this process most of the hot liquor in the digester at the end of the cook is displaced with cooler washer filtrate prior to blowing, resulting in a colder blowing temperature. The volume of blow gases flashed off is approximately 10% of a conventional blow heat system so the TRS containing gases are easier to collect. The hot liquor which is displaced out of the digester is used to preheat white liquor resulting in an energy savings.

- * New Blow Tank/Blow Heat Condensing--A new blow tank and blow heat condensing system will be installed to replace the existing system which is inefficient and vents considerable amounts of TRS containing blow gases to the atmosphere. The new blow heat condensing system will be sized to eliminate this TRS emissions source. Non-condensable gases will be collected and incinerated in the existing No. 3 Lime Kiln. Pulp from the new blow tank will be pumped to existing screening and washing operations.

- * New Turpentine Recovery--A new gas-off separator and turpentine condensers will be installed to replace existing equipment. Relief

gases from the digester cooking operation will be condensed and transported to the existing turpentine decanter for turpentine recovery. Non-condensable gases will be collected and incinerated in the existing No. 3 Lime Kiln.

A flow diagram of the new system is shown in Figure A-1.

The new batch digesting system will be required to meet the provisions of the federal New Source Performance Standards (NSPS), Subpart BB, Standards of Performance for Kraft Pulp Mills. The NSPS will apply to the following sources associated with the new digesting system at the JSC mill:

- o Batch digesters
- o Blow tank
- o Turpentine condensers

These sources are required to meet a TRS emission limit of 5 ppm by volume, dry basis, corrected to 10% O₂, unless the TRS gases are incinerated in a lime kiln. JSC will incinerate the TRS gases in the No. 3 Lime Kiln, which is a NSPS source and is subject to the NSPS for TRS from lime kilns. Therefore, the 5 ppm NSPS for digester systems is not applicable to the new digesting system. FAC Rule 17-2.600(4)(c)1. does not require a more stringent limit on the new digesting system or the No. 3 Lime Kiln than that imposed by the NSPS.

The Florida TRS rules require that a contingency plan be developed for times when emergency venting of TRS emissions occurs, or when a TRS control device is shut down for essential maintenance [FAC Rule 17-2.600(4)(c)1.c.]. JSC will submit the required contingency plan in conjunction with the application for an operating permit for this source.

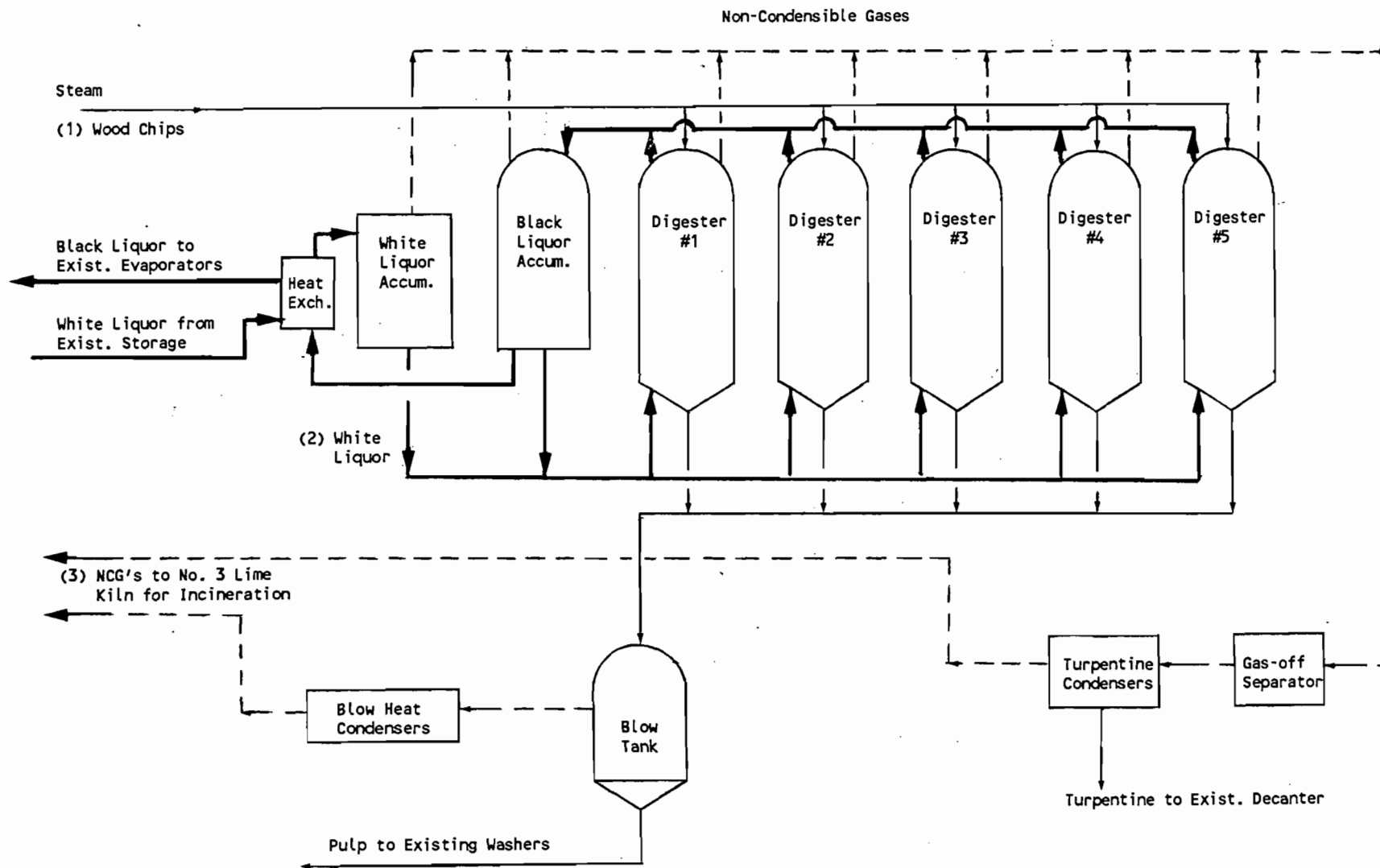


Figure A-1. Flow Diagram of JSC Proposed Batch Digester System

ATTACHMENT B

DERIVATION OF PROCESS RATES

I. DIGESTER INPUT RATES

Maximum daily pulp production = 1250 TPD air dried pulp (ADP)
= 52.08 TPH (avg) ADP

Peak production rate necessary to calculate peak flow rates
and volumes = 89.08 TPH ADP

A. MAXIMUM HOURLY INPUT RATES

Wood chips = 685,257 lb/hr (wet @ 50% moisture)
White liquor = 501,265 lb/hr
Total input = 685,257 + 501,265 = 1,186,522 lb/hr

B. MAXIMUM DAILY INPUT RATE

Wood chips = 400,641 lb/hr (wet @ 50% moisture)
White liquor = 293,069 lb/hr
Total input = 400,641 + 293,069 = 693,710 lb/hr

II. DIGESTER PRODUCT RATES

A. MAXIMUM HOURLY PRODUCT RATE

1. Pulp Production

Yield factor = 0.52

685,257 lb/hr wood chips @ 50% moisture = 342,629 lb/hr (dry)

342,629 lb/hr wood chips (dry) x 0.52 = 178,167 lb/hr pulp

= 89.08 TPH pulp

2138 TPD

2. Black Liquor

1,599,239 lb/hr BL @ 14.67 % solids = 234,608 lb/hr BLS

B. MAXIMUM DAILY PRODUCT RATE

1. Pulp Production

Yield factor = 0.52

400,641 lb/hr wood chips @ 50% moisture = 200,321 lb/hr (dry)

200,321 lb/hr wood chips x 0.52 = 104,167 lb/hr pulp

= 52.08 TPH pulp

2. Black Liquor

935,009 lb/hr BL @ 14.67% solids = 137,166 lb/hr BLS

III. TURPENTINE CONDENSERS

Turpentine production is estimated at 1.1 gal/ton of pulp

Maximum production rate = 89.08 TPH pulp x 1.1 gal/ton

= 98 gal/hr

98 gal/hr x 7.2 lb/gal = 706 lb/hr

ATTACHMENT C
EMISSION ESTIMATES

The cold blow digester system proposed by JSC will generate a much lower volume of non-condensable TRS gases than a conventional hot blow system. The volume of gases is on the order of 10% of the volume produced by a conventional hot blow. Although the volume of gases from the cold blow system will be low, little information is available related to the concentration of TRS in the non-condensable gases. However, it is expected that the cold blow system will produce less TRS than a conventional hot blow system. As a result, TRS emissions based upon a hot blow system are presented as an estimate of the maximum TRS expected from the cold blow system.

The USEPA publication entitled "Kraft Pulping: Control of TRS Emissions from Existing Mills" (EPA-450/2-78-003b) was used as the basis for estimating TRS emissions. The publication presents a maximum TRS emission rate from digesting systems of 10.5 lb/ton ADP.

$$\text{Maximum hourly TRS} = 89.08 \text{ TPH} \times 10.5 \text{ lb/ton}$$

$$= 935 \text{ lb/hr} \times 4.38 = 4095.3$$

$$\text{Maximum annual TRS} = 1,250 \text{ TPD} \times 10.5 \text{ lb/ton} \times 365 \text{ days/yr} / 2,000 \text{ lb/ton}$$

$$= 2,395 \text{ TPY}$$

REFERENCES

EPA-450/2-78-003b
OAQPS No. 1.2-091

Kraft Pulping

Control of TRS Emissions from Existing Mills

Emission Standards and Engineering Division

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air, Noise, and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

March 1979

Table 5-2. TRS EMISSIONS FROM THE EXISTING KRAFT PULP INDUSTRY

Source	Average Uncontrolled Level		Percent Capacity Controlled(1)	Typical Controlled Level		Average National Emissions		
	ppm	g/kg ADP (lb/T ADP)		ppm	g/kg ADP (lb/T ADP)	ppm	g/kg ADP (lb/T ADP)	megagrams
Recovery Furnace	550	7.5 (15.0)	88.7	5-70	0.075-1.05 (0.15-2.1)	92	1.25 (2.5)	39,000
Digester System	9500	0.75 (1.5)	58.4	5	0.01 (0.02)	4050	0.32 (0.64)	10,000
Multiple-Effect Evaporator System	6800	0.5 (1.0)	58.6	5	0.01 (0.02)	2920	0.22 (0.43)	6,700
Lime Kiln	170	0.4 (0.8)	28.2	5-40	0.0125-0.1 (0.025-0.2)	130	0.31 (0.62)	9,700
Brown Stock Washer System	30	0.15 (0.3)	2.8	5	0.01 (0.02)	30	0.15 (0.3)	4,420
Black Liquor Oxidation System	35	0.05 (0.1)	2.1	0-10	0.0-0.01 (0.0-0.02)	35	0.05 (0.1)	1,470
Smelt Dissolving Tank	60	0.1 (0.2)	-	-	-	60	0.1 (0.2)	2,940
Condensate Stripper System	5000	1.0 (2.0)	100	5	0.01 (0.02)	500	0.11 (0.22)	0.4

(1) Percentage based on mills controlled by existing state regulations, plus information collected during previous surveys.

or operator may use any of the following procedures during a performance test:

(1) Base compliance on control of the combined emissions;

(2) Utilize a method acceptable to the Administrator that compensates for the emissions from the facilities not subject to the provisions of this subpart, or;

(3) Any combination of the criteria of paragraphs (h)(1) and (h)(2) of this section.

(i) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, determinations of compliance with § 60.272a(a)(3) will only be based upon emissions originating from the affected facility(ies).

(j) Unless the presence of inclement weather makes concurrent testing infeasible, the owner or operator shall conduct concurrently the performance tests required under § 60.8 to demonstrate compliance with § 60.272a(a) (1), (2), and (3) of this subpart.

§ 60.276a Recordkeeping and reporting requirements.

(a) Records of the measurements required in § 60.274a must be retained for at least 2 years following the date of the measurement.

(b) Each owner or operator shall submit a written report of exceedances of the control device opacity to the Administrator semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(c) Operation at a furnace static pressure that exceeds the value established under § 60.274a(g) and either operation of control system fan motor amperes at values exceeding ± 15 percent of the value established under § 60.274a(c) or operation at flow rates lower than those established under § 60.274a(c) may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Administrator semiannually.

(d) The requirements of this section remain in force until and unless EPA,

in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(e) When the owner or operator of an EAF or AOD is required to demonstrate compliance with the standard under § 60.275a (h)(2) or (h)(3), the owner or operator shall obtain approval from the Administrator of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be post-marked 30 days prior to the performance test.

(Approved by the Office of Management and Budget under control number 2060-0038)

Subpart BB—Standards of Performance for Kraft Pulp Mills

§ 60.280 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in kraft pulp mills: Digester system, brown stock washer system, multiple-effect evaporator system, recovery furnace, smelt dissolving tank, lime kiln, and condensate stripper system. In pulp mills where kraft pulping is combined with neutral sulfite semichemical pulping, the provisions of this subpart are applicable when any portion of the material charged to an affected facility is produced by the kraft pulping operation.

(b) Except as noted in § 60.283(a)(1)(iv), any facility under paragraph (a) of this section that commences construction or modification after September 24, 1976, is subject to the requirements of this subpart.

[51 FR 18544, May 20, 1986]

§ 60.281 Definitions.

As used in this subpart, all terms not defined herein shall have the same meaning given them in the Act and in Subpart A.

(a) "Kraft pulp mill" means any stationary source which produces pulp from wood by cooking (digesting) wood chips in a water solution of sodium hydroxide and sodium sulfide (white liquor) at high temperature and pressure. Regeneration of the cooking chemicals through a recovery process is also considered part of the kraft pulp mill.

(b) "Neutral sulfite semichemical pulping operation" means any operation in which pulp is produced from wood by cooking (digesting) wood chips in a solution of sodium sulfite and sodium bicarbonate, followed by mechanical defibrating (grinding).

(c) "Total reduced sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide, that are released during the kraft pulping operation and measured by Reference Method 16.

(d) "Digester system" means each continuous digester or each batch digester used for the cooking of wood in white liquor, and associated flash tank(s), below tank(s), chip steamer(s), and condenser(s).

(e) "Brown stock washer system" means brown stock washers and associated knotters, vacuum pumps, and filtrate tanks used to wash the pulp following the digestion system. Diffusion washers are excluded from this definition.

(f) "Multiple-effect evaporator system" means the multiple-effect evaporators and associated condenser(s) and hotwell(s) used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).

(g) "Black liquor oxidation system" means the vessels used to oxidize, with air or oxygen, the black liquor, and associated storage tank(s).

(h) "Recovery furnace" means either a straight kraft recovery furnace or a cross recovery furnace, and includes the direct-contact evaporator for a direct-contact furnace.

(i) "Straight kraft recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains 7 weight percent

or less of the total pulp solids from the neutral sulfite semichemical process or has green liquor sulfidity of 28 percent or less.

(j) "Cross recovery furnace" means a furnace used to recover chemicals consisting primarily of sodium and sulfur compounds by burning black liquor which on a quarterly basis contains more than 7 weight percent of the total pulp solids from the neutral sulfite semichemical process and has a green liquor sulfidity of more than 28 percent.

(k) "Black liquor solids" means the dry weight of the solids which enter the recovery furnace in the black liquor.

(l) "Green liquor sulfidity" means the sulfidity of the liquor which leaves the smelt dissolving tank.

(m) "Smelt dissolving tank" means a vessel used for dissolving the smelt collected from the recovery furnace.

(n) "Lime kiln" means a unit used to calcine lime mud, which consists primarily of calcium carbonate, into quicklime, which is calcium oxide.

(o) "Condensate stripper system" means a column, and associated condensers, used to strip, with air or steam, TRS compounds from condensate streams from various processes within a kraft pulp mill.

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18544, May 20, 1986]

§ 60.282 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any recovery furnace any gases which:

(i) Contain particulate matter in excess of 0.10 g/dscm (0.044 gr/dscf) corrected to 8 percent oxygen.

(ii) Exhibit 35 percent opacity or greater.

(2) From any smelt dissolving tank any gases which contain particulate matter in excess of 0.1 g/kg black liquor solids (dry weight)[0.2 lb/ton black liquor solids (dry weight)].

(3) From any lime kiln any gases which contain particulate matter in excess of:

(i) 0.15 g/dscm (0.067 gr/dscf) corrected to 10 percent oxygen, when gaseous fossil fuel is burned.

(ii) 0.30 g/dscm (0.13 gr/dscf) corrected to 10 percent oxygen, when liquid fossil fuel is burned.

[43 FR 7572, Feb. 23, 1978]

§ 60.283 Standard for total reduced sulfur (TRS).

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:

(1) From any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the following conditions are met:

(i) The gases are combusted in a lime kiln subject to the provisions of paragraph (a)(5) of this section; or

(ii) The gases are combusted in a recovery furnace subject to the provisions of paragraphs (a)(2) or (a)(3) of this section; or

(iii) The gases are combusted with other waste gases in an incinerator or other device, or combusted in a lime kiln or recovery furnace not subject to the provisions of this subpart, and are subjected to a minimum temperature of 1200° F. for at least 0.5 second; or

(iv) It has been demonstrated to the Administrator's satisfaction by the owner or operator that incinerating the exhaust gases from a new, modified, or reconstructed brown stock washer system is technologically or economically unfeasible. Any exempt system will become subject to the provisions of this subpart if the facility is changed so that the gases can be incinerated.

(v) The gases from the digester system, brown stock washer system, or condensate stripper system are controlled by a means other than combustion. In this case, this system shall not discharge any gases to the atmosphere which contain TRS in excess of 5 ppm

by volume on a dry basis, corrected to the actual oxygen content of the untreated gas stream.

(vi) The uncontrolled exhaust gases from a new, modified, or reconstructed digester system contain TRS less than 0.005 g/kg ADP (0.01 lb/ton ADP).

(2) From any straight kraft recovery furnace any gases which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(3) From any cross recovery furnace any gases which contain TRS in excess of 25 ppm by volume on a dry basis, corrected to 8 percent oxygen.

(4) From any smelt dissolving tank any gases which contain TRS in excess of 0.016 g/kg black liquor solids as H₂S (0.033 lb/ton black liquor solids as H₂S).

(5) From any lime kiln any gases which contain TRS in excess of 8 ppm by volume on a dry basis, corrected to 10 percent oxygen.

[43 FR 7572, Feb. 23, 1978, as amended at 50 FR 6317, Feb. 14, 1985; 51 FR 18544, May 20, 1986]

§ 60.284 Monitoring of emissions and operations.

(a) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring systems:

(1) A continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from any recovery furnace. The span of this system shall be set at 70 percent opacity.

(2) Continuous monitoring systems to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere from any lime kiln, recovery furnace, digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system, except where the provisions of § 60.283(a)(1)(iii) or (iv) apply. These systems shall be located downstream of the control device(s) and the spans of these continuous monitoring system(s) shall be set:

(i) At a TRS concentration of 30 ppm for the TRS continuous monitoring system, except that for any cross recovery furnace the span shall be set at 50 ppm.

(ii) At 20 percent oxygen for the continuous oxygen monitoring system.

(b) Any owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate the following continuous monitoring devices:

(1) For any incinerator, a monitoring device which measures and records the combustion temperature at the point of incineration of effluent gases which are emitted from any digester system, brown stock washer system, multiple-effect evaporator system, black liquor oxidation system, or condensate stripper system where the provisions of § 60.283(a)(1)(iii) apply. The monitoring device is to be certified by the manufacturer to be accurate within ±1 percent of the temperature being measured.

(2) For any lime kiln or smelt dissolving tank using a scrubber emission control device:

(i) A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device is to be certified by the manufacturer to be accurate to within a gage pressure of ±500 pascals (ca. ±2 inches water gage pressure).

(ii) A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device is to be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

(c) Any owner or operator subject to the provisions of this subpart shall, except where the provisions of § 60.283(a)(1)(iv) or (a)(4) apply.

(1) Calculate and record on a daily basis 12-hour average TRS concentrations for the two consecutive periods of each operating day. Each 12-hour average shall be determined as the arithmetic mean of the appropriate 12

contiguous 1-hour average total reduced sulfur concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(2) Calculate and record on a daily basis 12-hour average oxygen concentrations for the two consecutive periods of each operating day for the recovery furnace and lime kiln. These 12-hour averages shall correspond to the 12-hour average TRS concentrations under paragraph (c)(1) of this section and shall be determined as an arithmetic mean of the appropriate 12 contiguous 1-hour average oxygen concentrations provided by each continuous monitoring system installed under paragraph (a)(2) of this section.

(3) Correct all 12-hour average TRS concentrations to 10 volume percent oxygen, except that all 12-hour average TRS concentration from a recovery furnace shall be corrected to 8 volume percent using the following equation:

$$C_{corr} = C_{max} \times (21 - X / 21 - Y)$$

where:

C_{corr} = the concentration corrected for oxygen.

C_{max} = the concentration uncorrected for oxygen.

X = the volumetric oxygen concentration in percentage to be corrected to (8 percent for recovery furnaces and 10 percent for lime kilns, incinerators, or other devices).

Y = the measured 12-hour average volumetric oxygen concentration.

(4) Record once per shift measurements obtained from the continuous monitoring devices installed under paragraph (b)(2) of this section.

(d) For the purpose of reports required under § 60.7(c), any owner or operator subject to the provisions of this subpart shall report semiannually periods of excess emissions as follows:

(1) For emissions from any recovery furnace periods of excess emissions are:

(i) All 12-hour averages of TRS concentrations above 5 ppm by volume for straight kraft recovery furnaces and above 25 ppm by volume for cross recovery furnaces.

(ii) All 6-minute average opacities that exceed 35 percent.

(2) For emissions from any lime kiln, periods of excess emissions are all 12-hour average TRS concentration above 8 ppm by volume.

(3) For emissions from any digester system, brown stock washer system, multiple-effect evaporator system, or condensate stripper system periods of excess emissions are:

(i) All 12-hour average TRS concentrations above 5 ppm by volume unless the provisions of § 60.283(a)(1) (i), (ii), or (iv) apply; or

(ii) All periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200 °F, where the provisions of § 60.283(a)(1)(iii) apply.

(e) The Administrator will not consider periods of excess emissions reported under paragraph (d) of this section to be indicative of a violation of § 60.11(d) provided that:

(1) The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from recovery furnaces.

(ii) Six percent for average opacities from recovery furnaces.

(2) The Administrator determines that the affected facility, including air pollution control equipment, is maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

(Approved by the Office of Management and Budget under control no. 2060-0021)

[43 FR 7572, Feb. 23, 1978, as amended at 51 FR 18545, May 20, 1986]

§ 60.285 Test methods and procedures.

(a) Reference methods in Appendix A of this part, except as provided under § 60.8(b), shall be used to determine compliance with § 60.282(a) as follows:

(1) Method 5 for the concentration of particulate matter and the associated moisture content,

(2) Method 1 for sample and velocity traverses,

(3) When determining compliance with § 60.282(a)(2), Method 2 for velocity and volumetric flow rate,

(4) Method 3 for gas analysis, and

(5) Method 9 for visible emissions.

(b) For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.85 dscm/hr (0.53 dscf/min) except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Administrator. Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure outlined in Method 5.

(c) Method 17 (in-stack filtration) may be used as an alternate method for Method 5 for determining compliance with § 60.282(a)(1)(i): *Provided*, That a constant value of 0.009 g/dscm (0.004 gr/dscf) is added to the results of Method 17 and the stack temperature is no greater than 205° C (ca. 400° F). Water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure outlined in Method 17.

(d) For the purpose of determining compliance with § 60.283(a) (1), (2), (3), (4), and (5), the following reference methods shall be used:

(1) Method 16 or, at the discretion of the owner or operator, Method 16A for the concentration of TRS.

(2) Method 3 for gas analysis, and

(3) When determining compliance with § 60.283(a)(4), use the results of Method 2, Method 16 or 16A, and the black liquor solids feed rate in the following equation to determine the TRS emission rate on an equivalent hydrogen sulfide (H₂S) basis.

$$E = (C_{\text{TRS}})(F)(Q_{\text{M}})/\text{BLS}$$

Where:

E=mass of TRS emitted per unit of black liquor solids (g/kg)(lb/ton).

C_{TRS}=average combined concentration of TRS as determined by Method 16 or 16A during the test period, ppm.

F=0.001417 g H₂S/m³ ppm for metric units.
=0.08844 × 10⁻⁶ lb H₂S/ft³ ppm for English units.

Q_M=dry volumetric stack gas flow rate corrected to standard conditions, dscm/hr (dscf/hr).

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BLS=black liquor solids feed rate, kg/hr (ton/hr).

(4) When determining whether a furnace is a straight kraft recovery furnace or a cross recovery furnace, TAPPI Method T.624 (incorporated by reference—see § 60.17) shall be used to determine sodium sulfide, sodium hydroxide, and sodium carbonate. These determinations shall be made three times daily from the green liquor and the daily average values shall be converted to sodium oxide (Na₂O) and substituted into the following equation to determine the green liquor sulfidity:

$$\text{GLS} = 100 C_{\text{Na}_2\text{S}} / (C_{\text{Na}_2\text{O}} + C_{\text{NaOH}} + C_{\text{Na}_2\text{CO}_3})$$

where:

GLS=percent green liquor sulfidity

C_{Na₂S}=average concentration of Na₂S expressed as Na₂O (mg/l)

C_{NaOH}=average concentration of NaOH expressed as Na₂O (mg/l)

C_{Na₂CO₃}=average concentration of Na₂CO₃ expressed as Na₂ (mg/l)

(5) When determining compliance with § 60.283(a)(1)(vi), use the results of Method 2, Method 16, and the pulp production rate in the equation specified in § 60.285(d)(3), except substitute the pulp production rate (PPR) [kg/hr (tons/hr)] for the black liquor solids feed rate (BLS).

(e) All concentrations of particulate matter and TRS required to be measured by this section from lime kilns or incinerators shall be corrected 10 volume percent oxygen and those concentrations from recovery furnaces shall be corrected to 8 volume percent oxygen. These corrections shall be made in the manner specified in § 60.284(c)(3).

[43 FR 7572, Feb. 23, 1978, as amended at 48 FR 3738, Jan. 27, 1983; 50 FR 6318, Feb. 14, 1985; 50 FR 9579, Mar. 8, 1985; 50 FR 19022, May 6, 1985]

§ 60.286 Innovative technology waiver.

(a) Pursuant to section 111(j) or the Clean Air Act, 42 U.S.C. 7411(j), the No. 10 batch digester at Owens-Illinois Incorporated's Valdosta kraft pulp mill in Clyattville, Georgia, shall comply with the following conditions:

(1) Owens-Illinois, Incorporated shall obtain the necessary permits as required by section 173 of the Clean

Air Act, as amended August 1977, to operate the No. 10 batch digester at the Valdosta mill.

(2) Commencing on February 14, 1985, and continuing for 2 years or to December 31, 1986, or until the displacement heating system that can achieve the standard specified in 40 CFR 60.283 is demonstrated to the Administrator's satisfaction, whichever comes first, Owens Illinois, Incorporated shall limit the discharge of TRS emissions to the atmosphere:

(i) From the No. 10 batch digester at the Valdosta mill to 0.02 lb of TRS per ton of air-dried pulp.

(ii) From the existing multiple-effect evaporators at the Valdosta mill to the TRS level existing prior to the modifications.

(3) Commencing the day after the expiration of the period described in paragraph (a)(2) of this section, and continuing thereafter, emissions of TRS from the No. 10 batch digester shall not exceed the TRS level of 0.005 g/kg ADP (0.01 lb/ton ADP) as specified in § 60.283 of this part.

(4) The No. 10 batch digester system shall comply with the provisions of §§ 60.284 and 60.285.

(5) A technology development report shall be sent to EPA, Emission Standards and Engineering Division (MD-13), Research Triangle Park, North Carolina 27711 and EPA Region IV, 345 Courtland, NE, Atlanta, Georgia 30365, postmarked before 60 days after the promulgation of this waiver and every 6 months thereafter while this waiver is in effect. The technology development report shall summarize the displacement heating system work including the results of tests of the various emission points being evaluated. The report shall include an updated schedule of attainment of 40 CFR 60.283 based on the most current information. Tests will be conducted prior to and after the digester modifications for TRS emissions and air flow rates on all vents to the atmosphere from the No. 10 digester system, the multiple effect evaporator system, and at the existing batch digester system. In addition, tests will be performed to determine the BOD content of the effluents from the multiple effect evaporator system, the brown stock washing

system, and the mill prior to and after the digester modifications.

(b) This waiver shall be a federally promulgated standard of performance. As such, it shall be unlawful for Owens-Illinois, Incorporated to operate the No. 10 batch digester or the multiple-effect evaporators in violation of the requirements established in this waiver. Violations of the terms and conditions of this waiver shall subject Owens-Illinois, Incorporated to enforcement under section 113 (b) and (c), 42 U.S.C. 7412 (b) and (c), and section 120, 42 U.S.C. 7420, of the Act as well as possible citizen enforcement under section 304 of the Act, 42 U.S.C. 7604.

[50 FR 6317, Feb. 14, 1985; 50 FR 7595, Feb. 25, 1985]

Subpart CC—Standards of Performance for Glass Manufacturing Plants

Source: 45 FR 66751, Oct. 7, 1980, unless otherwise noted.

§ 60.290 Applicability and designation of affected facility.

(a) Each glass melting furnace is an affected facility to which the provisions of this subpart apply.

(b) Any facility under paragraph (a) of this section that commences construction or modification after June 15, 1979, is subject to the requirements of this subpart.

(c) This subpart does not apply to hand glass melting furnaces, glass melting furnaces designed to produce less than 4,550 kilograms of glass per day and all-electric melters.

§ 60.291 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart A of this part, unless otherwise required by the context.

"All-electric melter" means a glass melting furnace in which all the heat required for melting is provided by electric current from electrodes submerged in the molten glass, although some fossil fuel may be charged to the furnace as raw material only.

"Borosilicate recipe" means glass product composition of the following

approximate ranges of weight proportions: 60 to 80 percent silicon dioxide, 4 to 10 percent total R_2O (e.g., Na_2O and K_2O), 5 to 35 percent boric oxides, and 0 to 13 percent other oxides.

"Container glass" means glass made of soda-lime recipe, clear or colored, which is pressed and/or blown into bottles, jars, ampoules, and other products listed in Standard Industrial Classification 3221 (SIC 3221).

"Experimental furnace" means a glass melting furnace with the sole purpose of operating to evaluate glass melting processes, technologies, or glass products. An experimental furnace does not produce glass that is sold (except for further research and development purposes) or that is used as a raw material for nonexperimental furnaces.

"Flat glass" means glass made of soda-lime recipe and produced into continuous flat sheets and other products listed in SIC 3211.

"Flow channels" means appendages used for conditioning and distributing molten glass to forming apparatuses and are a permanently separate source of emissions such that no mixing of emissions occurs with emissions from the melter cooling system prior to their being vented to the atmosphere.

"Glass melting furnace" means a unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass. The unit includes foundations, superstructure and retaining walls, raw material charger systems, heat exchangers, melter cooling system, exhaust system, refractory brick work, fuel supply and electrical boosting equipment, integral control systems and instrumentation, and appendages for conditioning and distributing molten glass to forming apparatuses. The forming apparatuses, including the float bath used in flat glass manufacturing and flow channels in wool fiberglass and textile fiberglass manufacturing, are not considered part of the glass melting furnace.

"Glass produced" means the weight of the glass pulled from the glass melting furnace.

"Hand glass melting furnace" means a glass melting furnace where the

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molten glass is removed from the furnace by a glassworker using a blowpipe or a pontil.

"Lead recipe" means glass product composition of the following ranges of weight proportions: 50 to 60 percent silicon dioxide, 18 to 35 percent lead oxides, 5 to 20 percent total R_2O (e.g., Na_2M and K_2O), 0 to 8 percent total R_2O_3 (e.g., Al_2O_3), 0 to 15 percent total RO (e.g., CaO , MgO), other than lead oxide, and 5 to 10 percent other oxides.

"Pressed and blown glass" means glass which is pressed, blown, or both, including textile fiberglass, noncontinuous flat glass, noncontainer glass, and other products listed in SIC 3229. It is separated into:

- (1) Glass of borosilicate recipe.
- (2) Glass of soda-lime and lead recipes.

- (3) Glass of opal, fluoride, and other recipes.

"Rebricking" means cold replacement of damaged or worn refractory parts of the glass melting furnace. Rebricking includes replacement of the refractories comprising the bottom, sidewalls, or roof of the melting vessel; replacement of refractory work in the heat exchanger; replacement of refractory portions of the glass conditioning and distribution system.

"Soda-lime recipe" means glass product composition of the following ranges of weight proportions: 60 to 75 percent silicon dioxide, 10 to 17 percent total R_2O (e.g., Na_2O and K_2O), 8 to 20 percent total RO but not to include any PbO (e.g., CaO , and MgO), 0 to 8 percent total R_2O_3 (e.g., Al_2O_3), and 1 to 5 percent other oxides.

"Textile fiberglass" means fibrous glass in the form of continuous strands having uniform thickness.

"With modified-processes" means using any technique designed to minimize emissions without the use of add-on pollution controls.

"Wool fiberglass" means fibrous glass of random texture, including fiberglass insulation, and other products listed in SIC 3296.

[45 FR 66751, Oct. 7, 1980, as amended at 49 FR 41035, Oct. 19, 1984]

§ 60.292 Standards for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator of a glass melting furnace subject to the provisions of this subpart shall cause to be discharged into the atmosphere—

(1) From any glass melting furnace fired exclusively with either a gaseous fuel or a liquid fuel, particulate matter at emission rates exceeding those specified in Table CC-1, Column 2 and Column 3, respectively, or

(2) From any glass melting furnace, fired simultaneously with gaseous and liquid fuels, particulate matter at emission rates exceeding STD as specified by the following equation:

$$STD = X [1.3(Y) + (Z)]$$

Where:

STD = Particulate matter emission limit, g of particulate/kg of glass produced.

X = Emission rate specified in Table CC-1 for furnaces fired with gaseous fuel (Column 2).

Y = Decimal percent of liquid fuel heating value to total (gaseous and liquid) fuel heating value fired in the glass melting furnaces as determined in § 60.296(f). (joules/joules).

Z = (1-Y).

(b) Conversion of a glass melting furnace to the use of liquid fuel is not considered a modification for the purposes of § 60.14.

(c) Rebricking and the cost of rebricking is not considered a reconstruction for the purposes of § 60.15.

(d) An owner or operator of an experimental furnace is not subject to the requirements of this section.

(e) During routine maintenance of add-on pollution controls, an owner or operator of a glass melting furnace subject to the provisions of paragraph (a) of this section is exempt from the provisions of paragraph (a) of this section if:

(1) Routine maintenance in each calendar year does not exceed 6 days;

(2) Routine maintenance is conducted in a manner consistent with good air pollution control practices for minimizing emissions; and

(3) A report is submitted to the Administrator 10 days before the start of

Commercial Utilization of Cold Blow and Extended Delignification Techniques in Batch Cooking

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SUNDS DEFIBRATOR

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INTRODUCTION

Conventional batch kraft cooking has many advantages in comparison with the continuous kraft process:

- High Availability
- Simple Design and Operation
- High Flexibility
- Low Sensitivity to Chip Quality Variations
- Low K-no. Variations
- Easily Expanded to High Production

On the other hand energy demand for continuous cooking has typically been about 40% lower than for the conventional batch process. This means that it has been necessary to develop a more energy efficient batch technology.

At the same time new process technologies aiming at more selective delignification have been developed. The extended delignification technology offers the possibility to reach lower K-no.s, thereby reducing the bleach chemical consumption as well as the effluent from the bleach plant.

These new technologies, cold blow and extended delignification, have been tested in full scale at the ASSI Karlsborg mill in Sweden. Based upon successful results, Karlsborg decided in 1984, to convert their 9350 cu. ft. batch digesters to the Sunds cold blow and extended delignification techniques. Start-up of the new system was in September 1985.

THE COLD BLOW SYSTEM

The cold blow technique (*Figure 1*) comprises the following steps:

- Chip filling where the chips are evenly distributed and packed within the digester preferably by utilizing a steam packer.
- After the digester has been filled with chips it is steamed with low pressure steam, added at the top of the digester. Air is vented through the strainers until the chips are preheated to about 210°F.
- White liquor preheated in a heat exchanger to almost cooking temperature and hot black liquor from a pressurized accumulator are charged to the digester. After liquor charging, the digester content will have a temperature of about 290°F as compared to 170-190°F for a conventional batch system.
- The higher starting temperature will result in a shorter heating time and also reduce the steam consumption for heating. As mentioned, the heating can be performed either directly or indirectly.
- The digester is then kept at cooking temperature and pressure until the target K-no. is reached.
- Cooking is interrupted by charging washer filtrate to the bottom of the digester, thus displacing the hot cooking liquor through strainers at the top of the digester. The hot liquor is collected in the accumulator. The digester content is cooled down to about 210°F. The hot black liquor in the accumulator is utilized for preheating of white liquor as well as for recharging black liquor in the next cook.
- The actual blowing of the digester starts by opening the blow valve. Pressure in the digester is maintained by connecting the accumulator to the top of the digester. The cold blow is more rapid and efficient than a conventional hot blow due to the reduced flashing. The cold blow technique has proven to eliminate TRS emissions from the digester area since gases relieved from the blow tank are condensed in an indirect condenser. The noncondensable gases leaving the condenser can either be burned in the lime kiln or in a separate burner.

Figure 1.

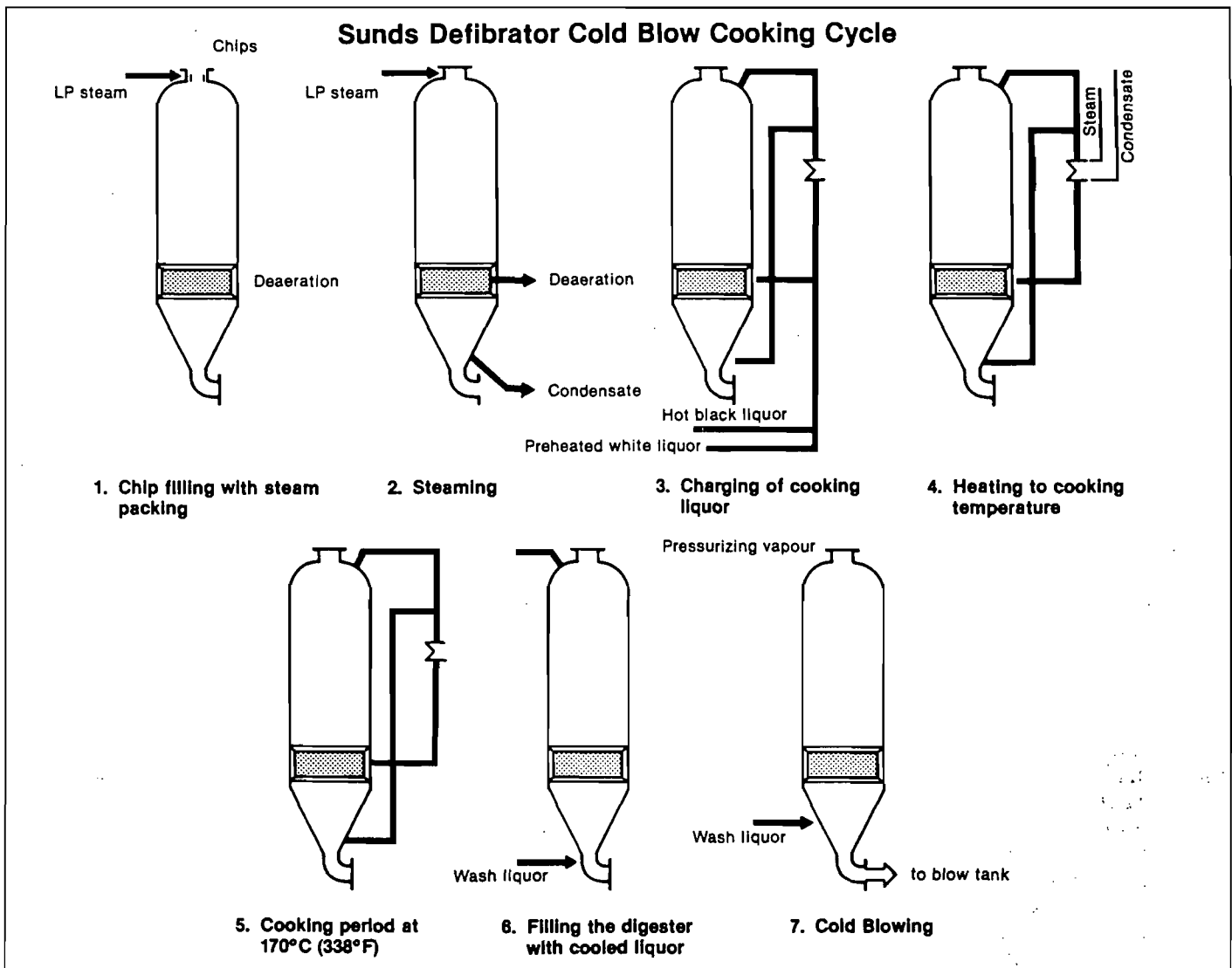
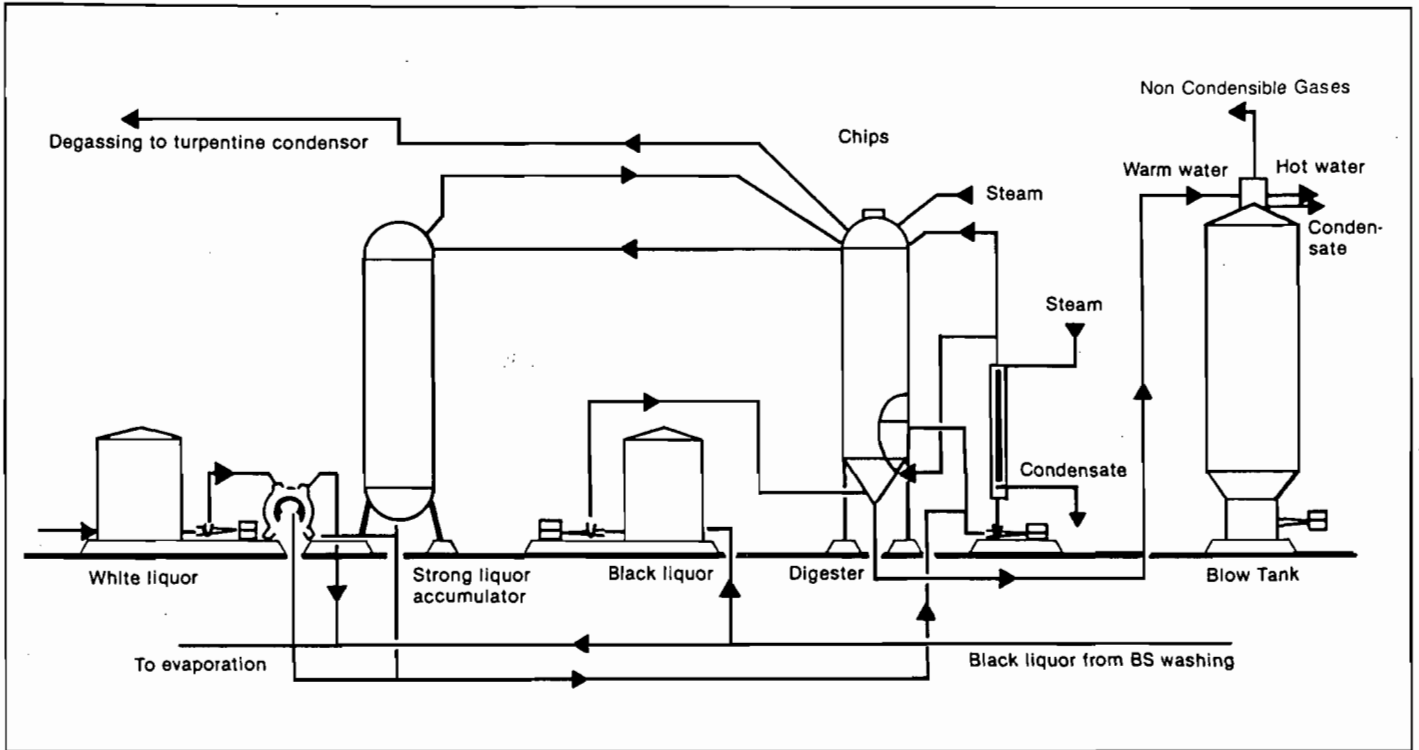


Figure 2.



A principle flow sheet for the cold blow system is shown in *Figure 2*. No conventional blow heat recovery is required. The hot liquor accumulator, the white liquor heat exchanger, and the black liquor tank for cooling liquor are characteristic for the cold blow system. Furthermore, less digester volume is required for a certain capacity due to the reduced time for heating and an overall shorter cooking cycle compared to a conventional batch system.

Table 1 compares energy consumption for direct and indirect heating with conventional hot blow as well as cold blow. Conventional hot blow with indirect heating results in lower energy consumption in cooking and evaporation than direct heating since the steam condensate can be recycled to the boiler house. Cold blow reduces steam consumption as the white liquor is preheated and the hot black liquor is recharged to the digester, resulting in a higher starting temperature.

Table 1.

	ENERGY CONSUMPTION (Million BTU/Ton)			
	Hot Blow		Cold Blow	
	Direct Heating	Indirect Heating	Direct Heating	Indirect Heating
COOKING	4.5	3.9	2.5	2.3
EVAPORATION	4.5	3.5	4.0	3.6
TOTAL	9.0	7.4	6.5	5.9