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. John L. Sipple
Plant Manager
The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

February 26, 1988

Enclosed is permit Nos. AC 62-140034 and 62-143536, for The Buckeye Cellulose Corporation to modify its existing facility by increasing the maximum total hourly through-put rate of raw materials and chemicals into the lime slaker system (2 lime slakers), while keeping the maximum total annual through-put rate the same as the previously permitted rate, and to construct/install a baghouse control system to service the two existing water treatment lime storage bins at The Buckeye Cellulose Corporation, located in Perry, Taylor 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, 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. Stewart, N.E. Dist.
R. Andreu, BCC
G. Nevin, P.E., Watkins Engineering and Constructors

Final Determination

The Buckeye Cellulose Corporation
Taylor County
Perry, Florida

Permit Numbers:
AC 62-140034
AC 62-143536

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

February 24, 1988

Final Determination
The Buckeye Cellulose Corporation
Taylor County, Florida

The construction applications and supplementary materials have been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in the Taco Times on January 13, 1988. The technical evaluation and preliminary determination (TE & PD) and draft permits were available for public inspection at the DER's Northeast District office and Bureau of Air Quality Management office.

Comments were received from Mr. Jim Farmer via a phone call on January 15, 1988, and Mr. Ray Andreu by letter dated January 20, 1988, and received January 22, 1988. The Bureau's response to their comments will follow:

Comment from Jim Farmer:

1. In Specific Condition No. 6, AC 62-140034, the "and" should be an "or" in the phrase "... storage bins and 22.0 tons..."

   The Bureau accepts the request and the following will be changed:

AC 62-140034

Specific Condition No. 6

From: Lime input to the water treatment lime storage bins shall not exceed 7.0 tons per hour from the causticizing lime storage bins and 22.0 tons per hour of purchased lime from rail and/or truck.

To: Lime input to the water treatment lime storage bins shall not exceed 7.0 tons per hour from the causticizing lime storage bins or 22.0 tons per hour of purchased lime from rail and/or truck.

Comments from Ray Andreu:

1. In the TE & PD, Section I.B., Project, there is a reference to Putnam County and it should have been Taylor County.

   The Bureau acknowledges this was an error. In the permits, Taylor County was correctly used.

2. Due to a typographical error, an increase in contemporaneous particulate matter emissions, used for PSD tracking, was assigned to the facility.

The Bureau agrees with the comment and, for PSD tracking purposes, the following tables in the TE & PD Section II., Rule Applicability, are revised:

From:

Table 2

Source	Net Potential Pollutant Emissions PM (TPY)
Water Treatment Lime Bins (2)	0.94
Lime Slakers (2)	0.22
Total:	1.16

Table 3

	PM Pollutant Emissions (TPY)
Existing Facility	22.99
Table 2	1.16
Total:	24.15

To:

Table 2

Source	Net Potential Pollutant Emissions PM (TPY)
Water Treatment Lime Bins (2)	0.94
Lime Slakers (2)	0.00
Total:	0.94

Table 3

	PM Pollutant Emissions (TPY)
Existing Facility	22.99
Table 2	0.94
Total:	23.93

Attachment to be Incorporated:

AC 62-140034 and -143536
No. 7. Mr. Ray Andreu's letter with attachments dated January 20, 1988, and received January 22, 1988.

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

THE TACO TIMES
Published Weekly in City of Perry
County of Taylor
State of Florida

STATE OF FLORIDA,
COUNTY OF TAYLOR

AFFIDAVIT OF PUBLICATION

Before me, the undersigned authority, personally appeared DONALD D. LINCOLN, who on oath says that he is the PUBLISHER of the Taco Times, weekly newspaper published in Perry, Taylor County, Florida, that the attached copy of advertisement being a notice to appear in re: Notice of Intent

was published in said newspaper in the issues of: 1/13/88

Affiant says further that the said Taco Times is a newspaper published at Perry in said Taylor County, Florida, and that the said newspaper has heretofore been continuously published in said Taylor County, Florida, each week; has been entered as second class mail matter at the Post Office in Perry, Florida, in said Taylor County, Florida for a period of one year next preceding the first publication of the attached copy of notice to appear; 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.

Donald D. Lincoln, Publisher

Sworn to and subscribed before me this 13 day of Jan., 1988

Notary Public

NOTARY PUBLIC, STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES JULY 24, 1991
BONDED THROUGH GEN. TRAVELERS

State of Florida
Department of Environmental
Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue permits to The Buckeye Cellulose Corporation to install/canstruct a baghouse control system to service the two existing water treatment lime storage bins and to modify the existing facility by increasing the maximum total hourly through-out rate of raw materials and chemicals into the lime slaker system (2 lime slakers), while keeping the maximum total annual through-put rate the same as the previously permitted rate. The Department is issuing this intent to issue for the reasons stated in the attached 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 Rd., 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 Rd.
Tallahassee, Florida 32399- 2400

Dept. of Environmental Regulation
Northeast District Office
3426 Bills Road
Jacksonville, Florida 32207

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.

1/13

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:
The Buckeye Cellulose Corp.
Rt. 3, Box 260
Perry, Florida 32347

Permit Number: AC 62-140034
Expiration Date: July 31, 1988
County: Taylor
Latitude/Longitude: 30° 03' 59" N
83° 33' 12" W
Project: Water Treatment Lime Storage Bins with a Baghouse Control 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/installation of a baghouse control system to serve the two (2) existing water treatment lime storage bins. The baghouse control system will be a Fuller Model 36FR8, with a design (actual) air flow rate of 1851 scfm and a penetration rate not to exceed 0.02 gr/dscf. The water treatment lime storage bins can receive lime from the causticizing lime storage bins and purchased lime from rail and truck.

The construction/installation will occur at the permittee's existing mill located approxmiately 5 miles southeast of Perry, Florida, off Foley Road. The UTM coordinates are Zone 17, 256.74 km East and 3328.70 km North.

The Source Classification Code is 3-05-102-05.

Construction/installation shall be in accordance with the permit application, plans, documents, and drawings, except as otherwise noted in the Specific Conditions.

Attachments are as follows:
1. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. Ray Andreu's cover letter and attachments dated July 21, 1987 and received July 22, 1987.
2. Mr. C. H. Fancy's letter dated August 25, 1987.
3. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. J. L. Sipple's cover letter and attachments dated September 11, 1987, and received September 14, 1987.
4. Mr. C. H. Fancy's letter dated October 13, 1987.
5. Document received in a December 9, 1987 meeting at the Bureau.
6. Mr. Ray Andreu's letter dated December 11, 1987, and received December 15, 1987.

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.

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.

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 non-compliance 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)
( ) 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.

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. Annual hours of operation are 8760.

2. The baghouse system associated with and controlling the emissions from the two water treatment lime storage bins shall not exhibit any visible emissions (not greater than 5% opacity). Compliance tests shall be conducted using EPA Method 9 pursuant to FAC Rule 17-2.700 and 40 CFR 60, Appendix A.

SPECIFIC CONDITIONS:

3. All vehicular and railway deliveries of purchased lime to the water treatment lime storage bins shall be accounted for on an annual basis and submitted as part of the annual operating report (AOR) to the DER's Northeast District office.

4. Failure to comply with specific condition No. 2 will necessitate the requirement to perform a mass emissions test for particulate matter (PM) using EPA Methods 1, 2, 3, and 5, pursuant to 40 CFR 60, Appendix A, and FAC Rule 17-2.700. PM emissions from the water treatment lime storage bins shall not exceed 0.02 gr/dscf (0.32 lb/hr, 1.39 TPY).

5. In accordance with FAC Rule 17-2.610(3), Unconfined Emissions of PM, reasonable precautions to control emissions of unconfined PM shall include, but not be limited to the following:

a) Reduced speeds for vehicular traffic.

b) Use of liquid resinous adhesives or other liquid dust suppressants or wetting agents.

c) Use of paving or other asphaltic materials.

d) Removal of particulate matter from paved roads and/or other paved areas by vacuum cleaning or otherwise by wetting prior to sweeping.

e) Covering of trucks, trailers, front end loaders, and other vehicules or containers to prevent spillage of particulate matter during transport.

f) Use of mulch, hydroseeding, grassing and/or other vegetative ground cover on barren areas to prevent or reduce windblown particulate matter.

g) Use of hoods, fans, filters, and similar equipment to contain, capture, and vent particulate matter.

h) Enclosure or covering of conveyor systems.

SPECIFIC CONDITIONS:

6. Lime input to the water treatment lime storage bins shall not exceed 7.0 tons per hour from the causticizing lime storage bins or 22.0 tons per hour of purchased lime from rail and/or truck.

7. Compliance of no visible emissions shall be demonstrated while the lime storage bins are receiving 7.0 tons per hour lime from the causticizing lime storage bins. Compliance of no visible emissions shall also be demonstrated while receiving 22.0 tons per hour or purchased lime from the resupply system (rail and/or truck).

8. In accordance with FAC Rule 17-2.620(2), objectionable odors shall not be allowed off plant property.

9. In accordance with FAC Rule 17-2.240, Circumvention, no person shall circumvent any air pollution control device, or allow the emissions or air pollutants without the applicable pollution control device operating properly.

10. The water treatment lime storage bins are subject to the provisions of FAC Rule 17-2.250, Excess Emissions.

11. Failure of a control system(s) to meet the applicable and maximum allowable particulate matter or visible emissions limiting standard and/or limit shall not be grounds for requesting a variance or relaxation of that standard and/or limit.

12. The lime handling system (i.e., conveyors, shutes, elevators, storage bins, etc.) shall be enclosed to minimize PM emissions.

13. The construction shall reasonably conform to the plans and schedule submitted in the application. If the applicant is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

PERMITTEE:
The Buckeye Cellulose Corp.

Permit Number: AC 62-140034
Expiration Date: July 31, 1988

SPECIFIC CONDITIONS:

To obtain a permit to operate, the applicant 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 test results and Certificate of Completion, to the Department's Northeast District 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. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the applicant requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the applicant must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this 25 day of Feb
19 88.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtmann

Dale Twachtmann, Secretary

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:
The Buckeye Cellulose Corp.
Rt. 3, Box 260
Perry, Florida 32347

Permit Number: AC 62-143536
Expiration Date: July 31, 1988
County: Taylor
Latitude/Longitude: 30° 03' 59" N
83° 33' 12" W
Project: Modification of Two Lime Slakers with a Condensing Scrubber 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 modification of the two newly constructed lime slakers, which are equipped with a condensing scrubber system, to allow for an increase in the maximum total hourly through-put rate of raw materials and chemicals periodically, while keeping the maximum total annual through-put rate at the previously permitted level (see AC 62-107857).

The modification will occur at the permittee's existing mill located approximately 5 miles southeast of Perry, Florida, off Foley Road. The UTM coordinates are Zone 17, 256.74 km East and 3328.70 km North.

The Source Classification Code is 3-07-001-99.

Construction/installation shall be in accordance with the permit application, plans, documents, and drawings, except as otherwise noted in the Specific Conditions.

Attachments are as follows:
1. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. Ray Andreu's cover letter and attachments dated July 21, 1987 and received July 22, 1987.
2. Mr. C. H. Fancy's letter dated August 26, 1987.
3. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. J. L. Sipple's cover letter and attachments dated September 11, 1987, and received September 14, 1987.
4. Mr. C. H. Fancy's letter dated October 13, 1987.
5. Document received in a December 9, 1987 meeting at the Bureau.
6. Mr. Ray Andreu's letter dated December 11, 1987, and received December 15, 1987.

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.

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.

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 non-compliance 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)
( ) 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.

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. Annual hours of operation are 8760.

2. The maximum total hourly through-put rate of raw materials and chemicals into the slaker system shall not exceed 59,240 lbs/hr (dry) of lime and 177,000 lbs/hr (dry) of green liquor solids.

3. The maximum total annual through-put rate of raw materials and chemicals into the slaker system shall not exceed 247,163 TPY (dry) of lime and 701,470 TPY (dry) of green liquor solids.

SPECIFIC CONDITIONS:

4. In accordance with FAC Rule 17-2.620(2), objectionable odors shall not be allowed off plant property.

5. In accordance with FAC Rule 17-2.240, Circumvention, no person shall circumvent any air pollution control device, or allow the emissions or air pollutants without the applicable pollution control device operating properly.

6. The lime slaker system is subject to the provisions of FAC Rule 17-2.250, Excess Emissions.

7. A scrubber system will be installed to control pollutant emissions from the lime slakers. Particulate matter (PM) emissions shall not exceed 2.08 lbs/hr and 9.13 TPY. Visible emissions (VE) shall be limited to less than 20% opacity. Compliance tests for PM shall be demonstrated using EPA Methods 1, 2, 3, and 5, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700. Compliance tests for VE shall be demonstrated using EPA Method 9, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700. Both initial compliance tests shall be conducted concurrently and while the causticizing system is operating at the maximum permitted hourly through-put rate of raw materials and chemicals. The test facilities for the lime slakers shall be in compliance with all applicable provisions of FAC Rule 17-2.700(4)(c). Sampling ports shall be located pursuant to FAC Rule 17-2.700(4)(c)1.c.i. Future compliance tests shall be demonstrated while operating at 90-100% of the maximum permitted rate.

8. Failure of a control system(s) to meet the applicable and maximum allowable particulate matter or visible emissions limiting standard and/or limit shall not be grounds for requesting a variance or relaxation of that standard and/or limit.

9. The lime handling system (i.e., conveyors, shutes, elevators, storage bins, etc.) shall be enclosed to minimize PM emissions.

10. A pressure gauge meter shall be installed on the scrubber system for the lime slakers to measure the scrubbing liquid supply pressure and the pressure sensor or tap is to be located close to the scrubber liquid discharge point. The monitoring device is to be certified by the manufacturer to be accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure.

PERMITTEE:
The Buckeye Cellulose Corp.

Permit Number: AC 62-143536
Expiration Date: July 31, 1988

SPECIFIC CONDITIONS:

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the applicant is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the applicant 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 test results and Certificate of Completion, to the Department's Northeast District 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. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the applicant requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the applicant must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this 25 day of Feb, 1983.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Dale Twachtmann

Dale Twachtmann, Secretary

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 7, 1987

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John L. Sipple
Plant Manager
The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

Dear Mr. Sipple:

Attached is one copy of the Technical Evaluation and Preliminary Determinations and proposed permits for The Buckeye Cellulose Corporation to modify its existing facility by increasing the maximum total hourly through-put rate of raw materials and chemicals into the lime slaker system (2 lime slakers), while keeping the maximum total annual through-put rate the same as the previously permitted rate, and to construct/ install a baghouse control system to service the two existing water treatment lime storage bins.

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: B. Stewart, N.E. Dist.
R. Andreu, BCC
G. Nevin, P.E., Watkins Engineers and Constructors

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Applications for Permits by:

The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

DER File Nos. AC 62-140034
62-143536

INTENT TO ISSUE

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

The applicant, The Buckeye Cellulose Corporation, applied on September 14, 1987, to the Department of Environmental Regulation for permits to construct/install a baghouse control system to service the two existing water treatment lime storage bins and to modify the existing facility by increasing the maximum total hourly through-put rate of raw materials and chemicals into the lime slaker system (2 lime slakers), while keeping the maximum total annual through-put rate the same as the previously permitted rate, at the applicant's existing mill off Foley Road in Perry, Taylor 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 air construction permits were 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 permits.

The Department will issue the permits 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:

B. Stewart, N.E. Dist.
R. Andreu, BCC
G. Nevin, P.E., Watkins Engineers and Constructors

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.

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 1-7-88.

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.

Martha J. Wise 1-7-88
Clerk Date

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department of Environmental Regulation hereby gives notice of its intent to issue permits to The Buckeye Cellulose Corporation to install/construct a baghouse control system to service the two existing water treatment lime storage bins and to modify the existing facility by increasing the maximum total hourly through-put rate of raw materials and chemicals into the lime slaker system (2 lime slakers), while keeping the maximum total annual through-put rate the same as the previously permitted rate. The Department is issuing this Intent to Issue for the reasons stated in the attached 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

Dept. of Environmental Regulation
Northeast District Office
3426 Bills Road
Jacksonville, Florida 32207

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.

Technical Evaluation
and
Preliminary Determination

The Buckeye Cellulose Corporation
Taylor County
Perry, Florida

Permit Numbers:
AC 62-140034
AC 62-143536

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

January 6, 1988

I. Project Description

A. Applicant

The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

B. Project

The applicant proposes to modify the facility by increasing the permitted maximum total hourly through-put rate of the raw materials and chemicals into the slaker system, while keeping the maximum total annual through-put rate at the previously permitted rate. Also, the applicant requests a permit for a new baghouse control system that has already been installed on the two existing water treatment storage bins.

The modification will occur at the applicant's existing facility located in Putnam County, Florida. The UTM coordinates are Zone 17, 256.74 km East and 3328.70 km North.

C. Process and Controls

The recently constructed slaker system's (two lime slakers) input rate of raw materials and chemicals was permitted at a projected maximum rate. Upon compliance testing, the mill found that the slaker system can process higher rates of the raw materials and chemicals (approximately 10%) and have requested this capability.

Since compliance tests on the recently constructed slaker system have been conducted at the requested increased through-put rate of raw materials and chemicals, the Bureau will agree to permitting the following:

1) The maximum total hourly through-put rate of raw materials and chemicals into the slaker system shall not exceed 59,240 lbs/hr (dry) of lime and 177,000 lbs/hr (dry) of green liquor solids; and,

2) The maximum total annual through-put rate of raw materials and chemicals into the slaker system shall not exceed 247,163 TPY (dry) of lime and 701,470 TPY (dry) of green liquor solids (the annual rates are based on the previous permitted maximum through-put rates: see AC 62-107857).

The slaker system is a source of particulate matter (PM) emissions and a wet scrubber system was installed to control these emissions.

The applicant, during the construction of the new causticizing system, replaced the existing baghouse system with a new baghouse system, which controls PM emissions arising from the

water treatment lime storage bins (2) while being filled with purchased lime (rail or truck) or lime from the causticizing lime bins (2). The lime bins can receive a maximum of 22.0 tons per hour (TPH) of purchased lime by rail and/or truck and a maximum of 7.0 TPH of lime from the causticizing lime bins.

The new baghouse control system installed is a Fuller Model 36FR8, with a design (actual) air flow of rate of 1851 scfm and a penetration rate not to exceed 0.02 grains per dry standard cubic feet (gr/dscf), which is also the allowable emission rate for PM.

II. Rule Applicability

The proposal is subject to preconstruction review pursuant to Florida Administrative Code (FAC) Rules 17-2 and 17-4, and Chapter 403, Florida Statutes.

The application packages were deemed complete on December 15, 1987.

The existing facility is major for all criteria pollutants in accordance with FAC Rule 17-2.100(111).

The existing facility is located in an area designated attainment for all criteria pollutants in accordance with FAC Rules 17-2.410 and 17-2.420.

The following table will reflect the proposed modification's maximum potential pollutant emissions:

Table 1

Source	Maximum Potential Pollutant Emissions PM (TPY)
Water Treatment Lime Bins	1.39*
Lime Slaker	9.13°

Note:* Based on 0.02 gr/dscf and 1851 scfm; 8760 hrs/yr
° Based on 2.08 lbs/hr (50 lbs/day); 8760 hrs/yr

The following table will reflect the net change in pollutant emissions from previously permitted and projected emission levels:

Table 2

Source	Net Potential Pollutant Emissions PM (TPY)
Water Treatment Lime Bins (2)	0.94
Lime Slakers (2)	0.22
Total:	1.16

The following table will reflect the total net contemporaneous PM emissions changes at the mill, which is to be used for prevention of significant deterioration (PSD) tracking purposes:

Table 3

	PM Pollutant Emissions (TPY)
Existing Facility	22.99
Table 2	1.16
Total:	24.15

Note: See Tables 1, 2, 3, and 4 in the Technical Evaluation and Preliminary Determination for the Construction Permits Nos. AC 62-107857 and -107858.

Based on Tables 2 and 3, the emissions of the proposed modification to the existing facility are not subject to new source review pursuant to FAC Rule 17-2.500(5) in accordance with FAC Rule 17-2.500(2)(d)3. Therefore, the proposed emissions shall be reviewed pursuant to FAC Rule 17-2.520, Sources Not Subject to PSD or Nonattainment Review.

Since there are no specific source emission limiting standard(s) contained in FAC Rules 17-2.600 or 17-2.660, the sources are subject to the provisions of FAC Rule 17-2.610, General Particulate Emission Limiting Standards. However, the applicant requested an allowable PM emissions rate of 0.02 gr/dscf as a measure to avoid triggering PSD new source review and the Department has accepted their request.

Also, the applicant has requested an allowable visible emissions (VE) standard of no visible emissions (not greater than 5% opacity) in lieu of performing a mass emissions compliance test for PM on the water treatment lime storage bins. However, the Department will require a mass compliance test for PM if the VE standard is exceeded. Therefore, the Department supports the VE standard as a demonstration of reasonable assurance and will maintain a tracking record of the potential pollutant emissions from these sources for PSD review purposes.

A meter was to be installed to measure the scrubbing liquid supply pressure on the slaker scrubber system and the pressure sensor or tap was to be located close to the scrubber liquid

discharge point. The monitoring device was to be certified by the manufacturer to be accurate within ± 15 percent of design scrubbing liquid supply pressure.

III. Summary of Emissions

A. Emission Limitations

The regulated pollutant emissions from the proposed modification are visible emissions (VE) and particulate matter (PM) emissions. The following table will reflect the maximum allowable emissions standards and limits applicable to the proposed modification:

Table 4

Source	Pollutant	Maximum Allowable Emission Standards/Limit
Water Treatment		
Lime Bins (2)	VE	No Visible Emissions (not greater than 5% opacity)
Lime Slakers (2)	PM	Not to Exceed 2.08 lbs/hr and 9.13 TPY (total)
	VE	Not to Exhibit 20% opacity or greater

B. Air Quality Analysis

From a technical review of the application package and its amendments, an air quality analysis is not required.

IV. Conclusion

The allowable pollutant emission limiting standards and limits from the proposed modification should not cause any violation to Florida's ambient air quality standards.

The General and Specific Conditions listed in the proposed permits (attached) will assure compliance with both the state and federal standards.

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:
The Buckeye Cellulose Corp.
Rt. 3, Box 260
Perry, Florida 32347

Permit Number: AC 62-140034
Expiration Date: July 31, 1988
County: Taylor
Latitude/Longitude: 30° 03' 59" N
83° 33' 12" W
Project: Water Treatment Lime Storage Bins with a Baghouse Control 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/installation of a baghouse control system to serve the two (2) existing water treatment lime storage bins. The baghouse control system will be a Fuller Model 36FR8, with a design (actual) air flow rate of 1851 scfm and a penetration rate not to exceed 0.02 gr/dscf. The water treatment lime storage bins can receive lime from the causticizing lime storage bins and purchased lime from rail and truck.

The construction/installation will occur at the permittee's existing mill located approxmiately 5 miles southeast of Perry, Florida, off Foley Road. The UTM coordinates are Zone 17, 256.74 km East and 3328.70 km North.

The Source Classification Code is 3-05-102-05.

Construction/installation shall be in accordance with the permit application, plans, documents, and drawings, except as otherwise noted in the Specific Conditions.

Attachments are as follows:
1. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. Ray Andreu's cover letter and attachments dated July 21, 1987 and received July 22, 1987.
2. Mr. C. H. Fancy's letter dated August 26, 1987.
3. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. J. L. Sipple's cover letter and attachments dated September 11, 1987, and received September 14, 1987.
4. Mr. C. H. Fancy's letter dated October 13, 1987.
5. Document received in a December 9, 1987 meeting at the Bureau.
6. Mr. Ray Andreu's letter dated December 11, 1987, and received December 15, 1987.

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.

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.

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 non-compliance 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)
( ) 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.

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. Annual hours of operation are 8760.

2. The baghouse system associated with and controlling the emissions from the two water treatment lime storage bins shall not exhibit any visible emissions (not greater than 5% opacity). Compliance tests shall be conducted using EPA Method 9 pursuant to FAC Rule 17-2.700 and 40 CFR 60, Appendix A.

SPECIFIC CONDITIONS:

3. All vehicular and railway deliveries of purchased lime to the water treatment lime storage bins shall be accounted for on an annual basis and submitted as part of the annual operating report (AOR) to the DER's Northeast District office.

4. Failure to comply with specific condition No. 2 will necessitate the requirement to perform a mass emissions test for particulate matter (PM) using EPA Methods 1, 2, 3, and 5, pursuant to 40 CFR 60, Appendix A, and FAC Rule 17-2.700. PM emissions from the water treatment lime storage bins shall not exceed 0.02 gr/dscf (0.32 lb/hr, 1.39 TPY).

5. In accordance with FAC Rule 17-2.610(3), Unconfined Emissions of PM, reasonable precautions to control emissions of unconfined PM shall include, but not be limited to the following:

a) Reduced speeds for vehicular traffic.

b) Use of liquid resinous adhesives or other liquid dust suppressants or wetting agents.

c) Use of paving or other asphaltic materials.

d) Removal of particulate matter from paved roads and/or other paved areas by vacuum cleaning or otherwise by wetting prior to sweeping.

e) Covering of trucks, trailers, front end loaders, and other vehicules or containers to prevent spillage of particulate matter during transport.

f) Use of mulch, hydroseeding, grassing and/or other vegetative ground cover on barren areas to prevent or reduce windblown particulate matter.

g) Use of hoods, fans, filters, and similar equipment to contain, capture, and vent particulate matter.

h) Enclosure or covering of conveyor systems.

SPECIFIC CONDITIONS:

6. Lime input to the water treatment lime storage bins shall not exceed 7.0 tons per hour from the causticizing lime storage bins and 22.0 tons per hour of purchased lime from rail and/or truck.

7. Compliance of no visible emissions shall be demonstrated while the lime storage bins are receiving 7.0 tons per hour lime from the causticizing lime storage bins. Compliance of no visible emissions shall also be demonstrated while receiving 22.0 tons per hour or purchased lime from the resupply system (rail and/or truck).

8. In accordance with FAC Rule 17-2.620(2), objectionable odors shall not be allowed off plant property.

9. In accordance with FAC Rule 17-2.240, Circumvention, no person shall circumvent any air pollution control device, or allow the emissions or air pollutants without the applicable pollution control device operating properly.

10. The water treatment lime storage bins are subject to the provisions of FAC Rule 17-2.250, Excess Emissions.

11. Failure of a control system(s) to meet the applicable and maximum allowable particulate matter or visible emissions limiting standard and/or limit shall not be grounds for requesting a variance or relaxation of that standard and/or limit.

12. The lime handling system (i.e., conveyors, shutes, elevators, storage bins, etc.) shall be enclosed to minimize PM emissions.

13. The construction shall reasonably conform to the plans and schedule submitted in the application. If the applicant is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

PERMITTEE:
The Buckeye Cellulose Corp.

Permit Number: AC 62-140034
Expiration Date: July 31, 1988

SPECIFIC CONDITIONS:

To obtain a permit to operate, the applicant 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 test results and Certificate of Completion, to the Department's Northeast District 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. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the applicant requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the applicant must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this_____day of_____
19___.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

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:
The Buckeye Cellulose Corp.
Rt. 3, Box 260
Perry, Florida 32347

Permit Number: AC 62-143536
Expiration Date: July 31, 1988
County: Taylor
Latitude/Longitude: 30° 03' 59" N
83° 33' 12" W
Project: Modification of Two Lime Slakers with a Condensing Scrubber 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 modification of the two newly constructed lime slakers, which are equipped with a condensing scrubber system, to allow for an increase in the maximum total hourly through-put rate of raw materials and chemicals periodically, while keeping the maximum total annual through-put rate at the previously permitted level (see AC 62-107857).

The modification will occur at the permittee's existing mill located approximately 5 miles southeast of Perry, Florida, off Foley Road. The UTM coordinates are Zone 17, 256.74 km East and 3328.70 km North.

The Source Classification Code is 3-07-001-99.

Construction/installation shall be in accordance with the permit application, plans, documents, and drawings, except as otherwise noted in the Specific Conditions.

Attachments are as follows:
1. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. Ray Andreu's cover letter and attachments dated July 21, 1987 and received July 22, 1987.
2. Mr. C. H. Fancy's letter dated August 26, 1987.
3. Application to Construct Air Pollution Sources, DER Form 17-1.202, with Mr. J. L. Sipple's cover letter and attachments dated September 11, 1987, and received September 14, 1987.
4. Mr. C. H. Fancy's letter dated October 13, 1987.
5. Document received in a December 9, 1987 meeting at the Bureau.
6. Mr. Ray Andreu's letter dated December 11, 1987, and received December 15, 1987.

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.

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.

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 non-compliance 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)
( ) 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.

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. Annual hours of operation are 8760.

2. The maximum total hourly through-put rate of raw materials and chemicals into the slaker system shall not exceed 59,240 lbs/hr (dry) of lime and 177,000 lbs/hr (dry) of green liquor solids.

3. The maximum total annual through-put rate of raw materials and chemicals into the slaker system shall not exceed 247,163 TPY (dry) of lime and 701,470 TPY (dry) of green liquor solids.

SPECIFIC CONDITIONS:

4. In accordance with FAC Rule 17-2.620(2), objectionable odors shall not be allowed off plant property.

5. In accordance with FAC Rule 17-2.240, Circumvention, no person shall circumvent any air pollution control device, or allow the emissions or air pollutants without the applicable pollution control device operating properly.

6. The lime slaker system is subject to the provisions of FAC Rule 17-2.250, Excess Emissions.

7. A scrubber system will be installed to control pollutant emissions from the lime slakers. Particulate matter (PM) emissions shall not exceed 2.08 lbs/hr and 9.13 TPY. Visible emissions (VE) shall be limited to less than 20% opacity. Compliance tests for PM shall be demonstrated using EPA Methods 1, 2, 3, and 5, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700. Compliance tests for VE shall be demonstrated using EPA Method 9, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700. Both initial compliance tests shall be conducted concurrently and while the causticizing system is operating at the maximum permitted hourly through-put rate of raw materials and chemicals. The test facilities for the lime slakers shall be in compliance with all applicable provisions of FAC Rule 17-2.700(4)(c). Sampling ports shall be located pursuant to FAC Rule 17-2.700(4)(c)1.c.i. Future compliance tests shall be demonstrated while operating at 90-100% of the maximum permitted rate.

8. Failure of a control system(s) to meet the applicable and maximum allowable particulate matter or visible emissions limiting standard and/or limit shall not be grounds for requesting a variance or relaxation of that standard and/or limit.

9. The lime handling system (i.e., conveyors, shutes, elevators, storage bins, etc.) shall be enclosed to minimize PM emissions.

10. A pressure gauge meter shall be installed on the scrubber system for the lime slakers to measure the scrubbing liquid supply pressure and the pressure sensor or tap is to be located close to the scrubber liquid discharge point. The monitoring device is to be certified by the manufacturer to be accurate within $\pm$ 15 percent of design scrubbing liquid supply pressure.

PERMITTEE:
The Buckeye Cellulose Corp.

Permit Number: AC 62-143536
Expiration Date: July 31, 1988

SPECIFIC CONDITIONS:

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the applicant is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the applicant 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 test results and Certificate of Completion, to the Department's Northeast District 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. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the applicant requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the applicant must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this_____day of_____,
19___.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

ATTACHMENT 1

Available Upon Request.

ATTACHMENT 2

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

August 26, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John Sipple
Plant Manager
The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

Dear Mr. Sipple:

Re: Request for Modifications to Construction Permits Nos. AC 62-107857 and -107858

The Department's Bureau of Air Quality Management (BAQM) has received the above request along with Mr. Ray Andreu's cover letter dated July 21, 1987. Also, the Department's Northeast District has received a request for operation permits, which incorporates the above referenced request in them, and associated processing fees (received on July 30, 1987). Based on a meeting and phone calls with Mr. Andreu and Mr. Bruce Mitchell of my staff, the following issues were discussed and clarified:

1) Since the request would consititute modifications to the above referenced construction permits, the construction permits, which contain federally enforceable conditions, cannot be amended without a complete permitting review process. Therefore, the mill will have to submit complete application packages with the appropriate processing fees to the Department's BAQM for any modifications to these sources.

2) The Department's Districts are not privileged to issue any operation permit that does not reflect the conditions established through a federally enforceable construction permit. Therefore, it is recommended that the mill submit amended operation permit requests to the Department's Northeast District and request that the permitted conditions be the same as what is contained in the above referenced construction permits. This process will also prevent the loss of any fee previously submitted for processing.

3) Since the expiration date for the above referenced construction permits is October 31, 1987, the Department's Northeast District will not have the minimum 90-day processing clock in which to review and process your operation permit amendment requests. Therefore, it is recommended that the mill submit expiration date extension requests to the Department's BAQM in order to provide the Department's Northeast District with adequate operation permit application review and processing time.

If there are any questions, please call Bruce Mitchell 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

cc: R. Andreu
B. Stewart
B. Pittman

ATTACHMENT 3

9/11/87
Perry, FL

First in cellulose

The Buckeye Cellulose Corporation

Mailing Address: Route 3 Box 260 Perry, Florida 32347 Phone: (904) 584-0121

September 11, 1987

Mr. Clair H. Fancy, Deputy Bureau Chief
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 31399-2400

Re: Construction Permit Modification Request for
Permit Numbers AC62--107857 and AC62-107858

Dear Mr. Fancy:

Enclosed are four (4) copies each of two (2) applications to modify construction permit numbers AC62-107857 and AC62-107858, including the necessary attachments. Also enclosed is a check for $1,000 to cover the fee for filing.

As you know, the new causticizing modernization project replaces our old causticizing system, which included four calcining units and an obsolete causticizing system. As we have confirmed via our compliance verification testing, the major environmental benefits originally envisioned from this project are being more than realized. These outstanding results are summarized in Attachment "I".

Basically, the changes are being requested to reflect actual construction details and realized capability. The requested revisions are minor in nature and do not have significant environmental impact.

Mr. Bruce Mitchell has identified two clarification items, based on the original modification request inquiry package dated 7/21/87. Our explanation of these items are as follows:

1. Slaker Rate Increase
We have requested a small increase in allowable slaking rate (less than 10% increase in rate vs. original application) to reflect the actual peak rate performance capability. This additional capability is a result of the normal variability of "real life" conditions versus good engineering practice design calculations for the green liquor feed pumps. The requested increase is still well within the design capability of the slakers' system and their air emissions control device. This was verified during the compliance verification process. In fact, the design for the two Model No. 18 slakers and control device utilized in this project could accommodate rates well in excess of the installed green liquor flow capability.

In addition, the requested slaker rate actually represents approximately 95% of our previous slaking capability. As a result, the total mass balance concern regarding the other pulping systems is not relevant.

We would like to assure you that our present slaker operation is consistent with the requirements and limitations contained in the original construction permit.

The higher slaker rate being requested is attractive to us in terms of system maintainability. The additional capability will enhance our liquor inventory recovery capability following extended causticizing system downtime periods.

2. Water Treatment Lime Storage Bins Baghouse Replacement

Contrary to our original concept, which utilized the old, existing baghouse, the water treatment lime storage bins baghouse was replaced during the project construction phase. This replacement was undertaken as a means of complying with the "no visible emissions" provision contained in the permit. In our later estimation, the old baghouse could not have satisfied the new visibility requirements.

The new baghouse system did not alter process weight rate, but did require a change in blower capacity (CFM) to reflect actual piping layout. On paper, as a result, under worst case assumptions this could result in a 0.94 TPY increase in particulate emissions. This insignificant increase, however, does not alter the overall PSD inapplicability permitting approach. Particulate matter still remains below the 25 TPY significance level.

As requested, a manufacturers performance warranty for the installed system is attached (See Attachment II).

In addition to the specific modification requests contained in this package, we would like to correct the typographical error contained in page 8 of 9 of the original construction permit (No. AC62-107857). The allowable slaker PM emissions should be 2.08 lbs/hr versus the 2.03 lbs/hr shown.

We have also enclosed a copy of the initial modification request inquiry package, including additions requested by Mr. Mitchell. This details the specific changes being requested.

We believe that this information is adequate to finalize the requested construction permit modifications. We are anxious to complete the remaining details on what must be considered a significant environmentally beneficial endeavor.

Should there be any additional questions, please contact Mr. Ray Andreu (Plant Environmental Manager) at (904) 584-0347.

Very truly yours,

THE BUCKEYE CELLULOSE CORPORATION
a Procter & Gamble Company

J. L. Simple
Plant Manager

JLS/RA:msw
3977T
Attachments

cc: Mr. Bruce Mitchell
Bureau of Air Quality Management
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Mr. William P. Stewart
Air Section Supervisor
Northeast District
Florida Department of
Environmental Regulation
3426 Bills Road
Jacksonville, FL 32207

Copied: Bruce Mitchell
Bill Stewart - NE Dist
~~F. Bruce - NW Dist.~~ } 9/14/87
CHF/BT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Causticizing System and Lime Handling [X] New[1] [ ] Existing[1]

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

COMPANY NAME: The Buckeye Cellulose Corporation COUNTY: Taylor

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) Lime Bins, Slakers, White Liquor and Lime Mud Pressure Filters and Fugitives*

SOURCE LOCATION: Street 5 to 6 miles S.E. of Perry City Perry

UTM: East 256,740 North 3328.700

Latitude 30 ° 03 ' 59 "N Longitude 83 ° 33 ' 12 "W

APPLICANT NAME AND TITLE: Mr. John L. Sipple, Plant Manager

APPLICANT ADDRESS: Route 3, Box 260; Perry, FL 32347

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Buckeye Cellulose Co

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

*Attach letter of authorization

Signed: John L. Sipple

John L. Sipple, Plant Manager
Name and Title (Please Type)

Date: 8/11/87 Telephone No. (904) 584-0121

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 ha been designed/examined by me and found to be in conformity with modern engineeri principles applicable to the treatment and disposal of pollutants characterized in t permit application. There is reasonable assurance, in my professional judgment, th

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

*This permit covers ancillary equipment and is a companion permit application to the No. 4 Lime Kiln application.

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 George F. Nevin

George F. Nevin
Name (Please Type)

Watkins Engineers and Constructors
Company Name (Please Type)

P.O. Box 2194; Tallahassee, FL 32316
Mailing Address (Please Type)

Florida Registration No. 8341 Date: 9/10/87 Telephone No. (904) 576-7181

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 No. 4 Lime Kiln application, Attachment A.

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

Start of Construction October 1985 Completion of Construction October 1987

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.)

See No. 4 Lime Kiln application.

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? No

   a. If yes, has "offset" been applied? --

   b. If yes, has "Lowest Achievable Emission Rate" been applied? --

   c. If yes, list non-attainment pollutants. --

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

3. Does the State "Prevention of Significant Deterioriation" (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? No

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 (dry)	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Green Liquor Solid	Particulate	100%	177,000 #	1a plus 1b
Lime Product	Particulate	100%	59,240 #	3a plus 3b
Water Treatment Lime Mud	Particulate	100%	9,673	25
Kiln Lime Product	Particulate	100%	54,167	14a plus 14b
Purchased Lime Product	Particulate	100%	44,000 #	15a plus 15b

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

1. Total Process Input Rate (lbs/hr): See Attachment A

2. Product Weight (lbs/hr): See page 4b of 12

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	2.08	9.13	Process Wt. Table*	36.6	20.8	91.2	2
TRS as H_2S	2.27	0.081	NA	NA	2.27	0.081	7
TRS as H_2S	2.27	0.066	NA	NA	2.27	0.066	9
Particulate	0.343	1.50	Process Wt. Table*	27.8-34.2	343	1502	16
Particulate	0.103	0.451	Process Wt. Table*	24.4	103	451	20

[1]See Section V, Item 2.

*$E = 17.31\ P^{0.16}$ for $P \geq 30$ TPH

$E = 3.59\ P^{0.62}$ for $P \leq 30$ TPH

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

- Revised 7/16/87

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		
Lime Product:				
- Purchased	Particulate	100	44,000 #	19
- Kiln Product	Particulate	100	14,000 #	18

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

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

[1]See Section V, Item 2.

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

- Revised 7/16/87

PRODUCT RATES

DESCRIPTIONS	PRODUCT (lb/hr dry)	RELATE TO FLOW DIAGRAM
White Liquor	113,150	26
Lime Mud to Kiln	96,726	11a
Lime Product to Water Treat.	5,417 Average	22
Lime Product to Slakers	56,430	3a plus 3b
Lime Product	44,000	18

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Micro-Pulsair 100S-10TR				
Equip. #08-1109 #	Particulate	99.9%	Submicron	See Att.B-2
Fuller Co. 36FR8				
Equip. #07-161 #	Particulate	99.9%	Submicron	See Att. B-2
Enso Slakers Scrubber 2X0600/800 #				
Equip. #08-1022 #	Particulate	90%+	10 μ +	See Att.B-4

E. Fuels

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 NA Maximum _____

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

All collected lime dust will be recycled back into lime bins.

Grits from the two slakers (Streams 5a and 5b) and dregs and $CaCO_3$ from dregs filter (Stream 24) go to onsite solid waste disposal or process sewer#. All liquid wastes are either recycled or go to NPDES treatment system.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):
See Attachment B-1.

Stack Height: _____ 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 Diamter: _____ 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 A

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 A

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

   See Attachment A

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 Attachment B

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 Attachment B

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 No. 4 Lime Kiln Application, 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).

   See No. 4 Lime Kiln Application, Attachment A

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.

   See No. 4 Lime Kiln Application, Attachment A

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation. Check attached.

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. Not Applicable.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY Not Applicable

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] 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

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

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:

2.

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:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

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:

[1]Explain method of determining efficiency.
[2]Energy 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:

[1]Applicant 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 _____( ) SO^{2}* _____ 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.

ATTACHMENT 4

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

October 13, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John L. Sipple
Plant Manager
The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

Dear Mr. Sipple:

Re: Completeness Review of the Application to Modify Air Pollution Sources, No. AC 62-140034

The Department received your cover letter and the above referenced application dated September 11, 1987, on September 14, 1987. Based on a review of the data, the application package is deemed incomplete. The following information, including all calculations, reference material and assumptions, shall be submitted to the DER's Bureau of Air Quality Management before the status can, again, be ascertained. If there are any responses that you feel are proprietary, please designate so and submit the material as a separate document and the Department will maintain confidentiality.

1. Was the pump(s) for the transport of green liquor to the slaker system replaced as part of the causticizing project just completed? If so, please describe each replacement and include the previous maximum pump capacity(ies).

2. What has been the level of the actual pumping rate of the transport of green liquor solids to the previous existing slaker system for the last five years and submit supporting data?

3. Provide a mill-wide material and chemical balance with the green liquor solids utilization rate of 160,153 lbs/hr. Provide the same analysis at 177,000 lbs/hr. For both rates, calculate the pollutant emission changes for each affected source (for existing sources, calculate actual pollutant emission changes and provide the last two years of data for justification; for sources that have had a construction permit, calculate any pollutant changes in the allowable

emissions) at 8760 hrs/yr, unless restricted by any federally enforceable permit condition.

4. Provide an inventory of all storage bins and tanks associated with the waste water treatment system and causticizing system to include their maximum storage capacities, incoming flow and discharge flow potential per pipe, the source(s) each incoming and discharge pipe is connected to, and an inventory of all pumps and their maximum pumping capacities per material handled associated with each storage bin and tank. Are any of the storage bins or tanks used for storage of more than one type of material? If so, please provide a detailed description.

5. Are there in-line flow meters associated with every pump and the incoming and discharge pipes to every storage tank and bin? If not, which ones currently do not have one? Are the valves computer or manually operated?

6. In your schematic of the proposed system, describe in detail the stream labeled "22 - To Process". Provide a detailed schematic as part of the description.

7. Provide a material and chemical balance of the waste water treatment system utilizing both 44 tons per hour and 51 tons per hour of purchased lime plus lime kiln product.

8. For the waste water treatment system, provide a detailed schematic of the incoming and returning pipes for the untreated and treated water, including their maximum flow rates, their origin(s), and the source(s) for which it will be discharged into after treatment.

9. Does the mill market white liquor?

10. Since the slaking system is in balance with the capacity of the lime kiln and was confirmed so in the original project application meeting of August 6, 1985, describe in detail, using a material and chemical balance, the mill-wide processes while utilizing both 27.08 and 71.08 tons per hour of CaO in the slaking system.

11. Since the lime kiln's maximum production rate of CaO is 27.08 tons per hour, how is it possible to process an equivalent of approximately 71 or more tons per hour CaO?

If there are any questions, please call Bruce Mitchell 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

cc: W. Stewart
R. Andreu
M. Zilberberg
B. Pittman

ATTACHMENT 5

SLAKER CONSTRUCTION PERMIT MODIFICATION

Slaker Input	Construction Permit Application (lb/hr dry)	Construction* Permit Modification (lb/hr dry)	Difference
Lime	56,430	59,240	
Green Liquor	160,153	177,000	
Total	216,583	236,240	+ 9.1%

* This is the rate at which the compliance tests were run. Compliance tests were 10% of permitted allowable.

JEF:msw
3068L
12/8/87

ATTACHMENT I

COMPARISON OF ACTUAL VERSUS ALLOWABLE EMISSIONS

Source	Parameter	Emissions: Verification Results	Emissions: Permitted Allowable
Lime Kiln	Particulate (Natural Gas)	2.0 lbs/hr	44.7 lbs/hr
	(#6 Fuel Oil)	12.7 lbs/hr	56.2 lbs/hr
	Visible Emissions	0%	20%
Lime Slaker	Particulate	0.23 lbs/hr	2.08 lbs/hr
	Visible Emissions	0%	20%
Water Treatment Lime Silos Baghouse	Visible Emissions	0%	< 5%
Causticizing Lime Silos Baghouse	Visible Emissions	0%	< 5%

RA:msw
2858L
9/1/87

ATTACHMENT 6

First in cellulose

The Buckeye Cellulose Corporation
A Procter and Gamble Company
Mailing Address: Route 3 Box 260 Perry, Florida 32347 Phone: (904) 584-0121

DER
DEC 1[illegible]
BAQM

December 11, 1987

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

Re: Completeness Review of the Applications to Modify Construction Permits for the #4 Lime Kiln and Causticizing System

Dear Mr. Fancy:

This letter provides confirmation of our 12/9/87 meeting, during which we resolved the questions that were included in your 10/13/87 incompleteness letter regarding the above referenced subject. We would first like to express our appreciation for this time you provided us with during our recent meeting. Your participation was crucial to the successful resolution of all the issues.

The major discussion item during the meeting was the approval of the requested increase in maximum allowable slaker system process rate. As we agreed, the requested rate is appropriate and the construction permit will be modified accordingly. To address the Department's concern regarding the management of on-going incremental rate increases in a complex facility, it was also agreed to retain the existing maximum allowable rate in terms of an annualized maximum. We applaud this unique solution which provides the necessary environmental protection and provides us with the needed operational flexibility. This approach could provide similar solutions in other areas.

As we also agreed, the other minor permit modification requests will be incorporated into the forthcoming public notice preliminary drafts.

As you are aware, the existing construction permit expires at the end of January. As a result, we would appreciate the timely completion of the remaining construction permit modification process. If the need arises, however, we could initiate another expiration extension request to provide you with the needed time.

Again, thank you for your continued commitment to the identification of sound and realistic solutions to environmental issues. If we can provide any further assistance, please do not hesitate to call on us.

Copied CHF|BT
Bruce Mitchell 12/17/87

THE BUCKEYE CELLULOSE CORPORATION
a Procter & Gamble Company

Ray Andreu
Plant Environmental Manager

RA:msw
3073L

Technical Evaluation
and
Preliminary Determination

The Buckeye Cellulose Corporation
Taylor County
Perry, Florida

Permit Numbers:
AC 62-140034 Issued 2-26-88
AC 62-143536 " "

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

January 6, 1988

I. Project Description

A. Applicant

The Buckeye Cellulose Corporation
Route 3, Box 260
Perry, Florida 32347

B. Project

The applicant proposes to modify the facility by increasing the permitted maximum total hourly through-put rate of the raw materials and chemicals into the slaker system, while keeping the maximum total annual through-put rate at the previously permitted rate. Also, the applicant requests a permit for a new baghouse control system that has already been installed on the two existing water treatment storage bins.

The modification will occur at the applicant's existing facility located in Putnam County, Florida. The UTM coordinates are Zone 17, 256.74 km East and 3328.70 km North.

C. Process and Controls

The recently constructed slaker system's (two lime slakers) input rate of raw materials and chemicals was permitted at a projected maximum rate. Upon compliance testing, the mill found that the slaker system can process higher rates of the raw materials and chemicals (approximately 10%) and have requested this capability.

Since compliance tests on the recently constructed slaker system have been conducted at the requested increased through-put rate of raw materials and chemicals, the Bureau will agree to permitting the following:

1) The maximum total hourly through-put rate of raw materials and chemicals into the slaker system shall not exceed 59,240 lbs/hr (dry) of lime and 177,000 lbs/hr (dry) of green liquor solids; and,

2) The maximum total annual through-put rate of raw materials and chemicals into the slaker system shall not exceed 247,163 TPY (dry) of lime and 701,470 TPY (dry) of green liquor solids (the annual rates are based on the previous permitted maximum through-put rates: see AC 62-107857).

The slaker system is a source of particulate matter (PM) emissions and a wet scrubber system was installed to control these emissions.

The applicant, during the construction of the new causticizing system, replaced the existing baghouse system with a new baghouse system, which controls PM emissions arising from the

water treatment lime storage bins (2) while being filled with purchased lime (rail or truck) or lime from the causticizing lime bins (2). The lime bins can receive a maximum of 22.0 tons per hour (TPH) of purchased lime by rail and/or truck and a maximum of 7.0 TPH of lime from the causticizing lime bins.

The new baghouse control system installed is a Fuller Model 36FR8, with a design (actual) air flow of rate of 1851 scfm and a penetration rate not to exceed 0.02 grains per dry standard cubic feet (gr/dscf), which is also the allowable emission rate for PM.

II. Rule Applicability

The proposal is subject to preconstruction review pursuant to Florida Administrative Code (FAC) Rules 17-2 and 17-4, and Chapter 403, Florida Statutes.

The application packages were deemed complete on December 15, 1987.

The existing facility is major for all criteria pollutants in accordance with FAC Rule 17-2.100(111).

The existing facility is located in an area designated attainment for all criteria pollutants in accordance with FAC Rules 17-2.410 and 17-2.420.

The following table will reflect the proposed modification's maximum potential pollutant emissions:

Table 1

Source	Maximum Potential Pollutant Emissions PM (TPY)
Water Treatment Lime Bins	1.39*
Lime Slaker	9.13°

Note:* Based on 0.02 gr/dscf and 1851 scfm; 8760 hrs/yr
° Based on 2.08 lbs/hr (50 lbs/day); 8760 hrs/yr

The following table will reflect the net change in pollutant emissions from previously permitted and projected emission levels:

Table 2

Source	Net Potential Pollutant Emissions PM (TPY)
Water Treatment Lime Bins (2)	0.94
Lime Slakers (2)	0.22
Total:	1.16

The following table will reflect the total net contemporaneous PM emissions changes at the mill, which is to be used for prevention of significant deterioration (PSD) tracking purposes:

Table 3

	PM Pollutant Emissions (TPY)
Existing Facility	22.99
Table 2	1.16
Total:	24.15

Note: See Tables 1, 2, 3, and 4 in the Technical Evaluation and Preliminary Determination for the Construction Permits Nos. AC 62-107857 and -107858.

Based on Tables 2 and 3, the emissions of the proposed modification to the existing facility are not subject to new source review pursuant to FAC Rule 17-2.500(5) in accordance with FAC Rule 17-2.500(2)(d)3. Therefore, the proposed emissions shall be reviewed pursuant to FAC Rule 17-2.520, Sources Not Subject to PSD or Nonattainment Review.

Since there are no specific source emission limiting standard(s) contained in FAC Rules 17-2.600 or 17-2.660, the sources are subject to the provisions of FAC Rule 17-2.610, General Particulate Emission Limiting Standards. However, the applicant requested an allowable PM emissions rate of 0.02 gr/dscf as a measure to avoid triggering PSD new source review and the Department has accepted their request.

Also, the applicant has requested an allowable visible emissions (VE) standard of no visible emissions (not greater than 5% opacity) in lieu of performing a mass emissions compliance test for PM on the water treatment lime storage bins. However, the Department will require a mass compliance test for PM if the VE standard is exceeded. Therefore, the Department supports the VE standard as a demonstration of reasonable assurance and will maintain a tracking record of the potential pollutant emissions from these sources for PSD review purposes.

A meter was to be installed to measure the scrubbing liquid supply pressure on the slaker scrubber system and the pressure sensor or tap was to be located close to the scrubber liquid

discharge point. The monitoring device was to be certified by the manufacturer to be accurate within ± 15 percent of design scrubbing liquid supply pressure.

III. Summary of Emissions

A. Emission Limitations

The regulated pollutant emissions from the proposed modification are visible emissions (VE) and particulate matter (PM) emissions. The following table will reflect the maximum allowable emissions standards and limits applicable to the proposed modification:

Table 4

Source	Pollutant	Maximum Allowable Emission Standards/Limit
Water Treatment		
Lime Bins (2)	VE	No Visible Emissions (not greater than 5% opacity)
Lime Slakers (2)	PM	Not to Exceed 2.08 lbs/hr and 9.13 TPY (total)
	VE	Not to Exhibit 20% opacity or greater

B. Air Quality Analysis

From a technical review of the application package and its amendments, an air quality analysis is not required.

IV. Conclusion

The allowable pollutant emission limiting standards and limits from the proposed modification should not cause any violation to Florida's ambient air quality standards.

The General and Specific Conditions listed in the proposed permits (attached) will assure compliance with both the state and federal standards.

No changes?

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

DER
SEP 14 1987
BAQM

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Lime Kiln [X] New[1] [ ] Existing[1]

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

COMPANY NAME: The Buckeye Cellulose Corporation COUNTY: Taylor

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) No. 4 Lime Kiln with ESP*

SOURCE LOCATION: Street 5 to 6 miles S.E. of Perry City Taylor

UTM: East 256,740 North 3328.700

Latitude 30 ° 03 ' 59 "N Longitude 83 ° 33 ' 12 "W

APPLICANT NAME AND TITLE: Mr. John L. Sipple, Plant Manager

APPLICANT ADDRESS: Route 3, Box 260; Perry, FL 32347

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Buckeye Cellulose Corp.

I certify that the statements made in this application for a construction/modification 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: John L. Sipple

John L. Sipple, Plant Manager
Name and Title (Please Type)

Date: 8/11/87 Telephone No. (904) 584-0131

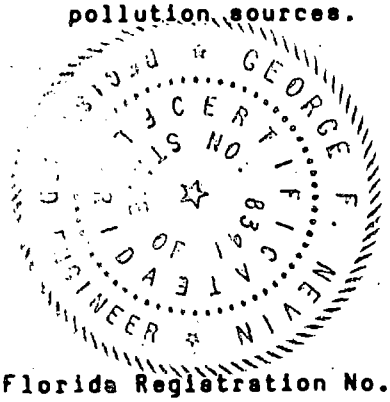
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

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)

*Minor sources are covered in a companion permit.

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 George F. Nevin

George F. Nevin
Name (Please Type)

Watkins Engineers and Constructors
Company Name (Please Type)

P.O. Box 2194; Tallahassee, FL 32316
Mailing Address (Please Type)

Florida Registration No. 8341 Date: 9/10/87 Telephone No. (904) 576-7181

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.

The essence of this project is the replacement of four existing lime combustion units with one large kiln for greater fuel efficiency--appreciably less BTU/ton of lime product. This project results in a dramatic reduction in most criteria pollutants. See Attachment A for details.

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

Start of Construction October 1985 Completion of Construction October 1987

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.)

Electrostatic Precipitator:	$1,640,000	*Causticizing Lime Bin Baghouse:	$50,000
Continuous Emission Monitors:	$150,000	*Slakers Scrubber:	$75,000
Precoat Filter Size Increase:	$110,000	Total:	$2,040,000
I.D. Fan Increase:	$15,000		

*From companion permit.

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?	No
a. If yes, has "offset" been applied?	--
b. If yes, has "Lowest Achievable Emission Rate" been applied?	--
c. If yes, list non-attainment pollutants.	--
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI.	No
3. Does the State "Prevention of Significant Deterioriation" (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.

See Attachment A for Items F. 3. and F. 4.

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		
Lime Mud (dry)	Particulate	100%	96,726	Stream 11a
			(Bone dry feed)	

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

1. Total Process Input Rate (lbs/hr): 103,872 Bone Dry Feed (Stream 12)

2. Product Weight (lbs/hr): 54,167 lime product, dry basis (Stream 14a and 14b)

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulates	56.20	246.16	*See below.	Gas/Oil 44.7/56.2+	7,146	31,299	13b
Sulfur Dioxide	20.1	85.4	N/A	N/A	20.1	85.4	13b
Nitrogen Oxides	198.0	416.3	N/A	N/A	198.0	416.3	13b
Carbon Monoxide	81.3	355.9	N/A	N/A	81.3	355.9	13b
Vol.Org.Compds	9.5	41.5	N/A	N/A	9.5	41.5	13b

[1]See Section V, Item 2.

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

*NSPS, 40 CFR 60, Subpart BB: Gas firing--0.067 gr/dscf, corrected to 10 percent oxygen.

+This allowable level for oil firing is more restrictive than NSPS.

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		

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

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Tot. Red.Sulfur	3.28	14.37	**See Below	3.28	53.5	227.7	13b

[1]See Section V, Item 2.

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

**NSPS, 40 CFR 60, Subpart BB: 8 ppm by volume, dry basis, corrected to 10 percent oxygen.

D. Control Devices: (See Section V, Item 4) (Section D precipitator information previously revised 1/17/86 in submittal)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Electrostatic Precipitator	Particulate	99.2%	Submicron	See Att. F,
(Vendor not yet selected)				pg. F-1, F-2
Process Controls	TRS	93.9%	Not Applicable	See Att. F,
				pg. F-3, F-4

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.170 MMCF	0.170 MMCF	176
No. 6 Fuel Oil	1214 gallons	1214 gallons	176

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

Fuel Analysis: No. 6 Fuel Oil* Natural Gas: 1,040 BTU/scf

Percent Sulfur: 2.5% maximum Percent Ash: 0.1 typical

Density: 8.1 lbs/gal Typical Percent Nitrogen: 0.4 based on 1 test

Heat Capacity: 17,901 BTU/lb 145,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): None

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

Annual Average None Maximum

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

Particulates collected in precipitator will be recycled dry back into the lime kiln (flow stream 11b). Grits from the two slakers (Streams 5a and 5b) and dregs and $CaCO_3$ from dregs filters (Stream 24) go to onsite solid waste disposal or process sewer. All liquid wastes go to NPDES treatment system.

* Includes small quantity of used oil generated at the facility and burned as fuel. Oil does not contain PCB's.

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

Stack Height: 100 to 125 ft. Stack Diameter: 6.5 to 8.5 ft.

Gas Flow Rate: 108,000/100,000 (Gas/Oil) ACFM 45,020/41,685 (Gas/Oil) DSCFM Gas Exit Temperature: 290-430 °F.

Water Vapor Content: 30-40 % Velocity: 29 to 54 FPS

*Final stack design will be provided after vendor selection and prior to construction of the stack.

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 E.
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 B for emission estimates and Attachment A for compliance methods.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   See Attachment B.
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 Attachment F.
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 Attachment F.
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).
   See Attachment A.
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.
   See Attachment A.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation. (Check attached)

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. Not Applicable

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY
Not Applicable

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] 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

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

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:

2.

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:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

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:

[1]Explain method of determining efficiency.
[2]Energy 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:

[1]Applicant 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 _____ ( ) SO_2* _____ 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.

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

August 27, 1987

Mr. John Sipple
Plant Manager
The Buckeye Cellulose Corporation
Rt. 3, Box 260
Perry, Florida 32347

Dear Mr. Sipple:

Re: Expiration Date Extension for Construction Permits Nos. AC 62-107857 and -107858

The Department is in receipt of your letter dated August 21, 1987, which requested an extension of the expiration date for the above referenced permits. The following shall be changed and added:

Expiration Date:

From: October 31, 1987
To: January 29, 1988

Attachment to be Incorporated:

AC 62-107857

3. Mr. John Sipple's letter dated August 21, 1987, and received August 25, 1987.

AC 62-107858

5. Mr. John Sipple's letter dated August 21, 1987, and received August 25, 1987.

This letter must be attached to your construction permits, Nos. AC 62-107857 and -107858, and shall become a part of the permits.

Sincerely,

Dale Twachtmann
Secretary

DT/ks

cc: B. Stewart
B. Pittman, Esq.
R. Andreu

AC 62-107857:
ATTACHMENT 3

AC 62-107858:
ATTACHMENT 5

24 Aug 87
Perry, FL

First in cellulose

The Buckeye Cellulose Corporation

A Procter and Gamble Company

Mailing Address: Route 3 Box 260 Perry, Florida 32347 Phone: (904) 584-0121

August 21, 1987

DER

AUG 25 1987

BAQM

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

RE: Request for Expiration Extension for Causticizing Modernization Project
Permit Numbers AC62-107857 and AC62-107858

Dear Mr. Fancy:

This is to request a 90 day expiration date extension for the Causticizing Modernization Project permit numbers AC62-107857 and AC62-107858. The request is being made to ensure the necessary time to process the appropriate permit modification requests, which are currently being prepared.

Should there be any questions, please contact Mr. Ray Andreu, Plant Environmental Manager, at (904) 584-0347.

Thank you for your consideration of this matter.

Very truly yours,

THE BUCKEYE CELLULOSE CORPORATION
a Procter & Gamble Company

John Sipple
Plant Manager

JLS:ktf
1438F

cc: Mr Bruce Mitchell
Bureau of Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Mr. William P. Stewart
Air Section Supervisor
Northeast District
Department of Environmental Regulation
3426 Bills Road
Jacksonville, Florida 32207

Copied: Bruce Mitchell
CHF/BT
8/25/87

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 28, 1988

CERTIFIED MAIL - Return Receipt Requested

Mr. John Sipple
Plant Manager
The Buckeye Cellulose Corporation
Rt. 3, Box 260
Perry, Florida 32347

Dear Mr. Sipple:

Re: Amendments to Air Construction Permits
Nos. AC 62-107857 and -107858

The Department is in receipt of your letter dated January 22, 1988, which requested an extension of the expiration dates for the above referenced permits and to incorporate a July 21, 1987 package submittal into the construction permit No. AC 62-107858. The following shall be changed and added:

Expiration Date:

From: January 29, 1988
To: March 31, 1988

Attachments to be Incorporated:

AC 62-107857

4. Mr. J. L. Sipple's letter dated January 22, 1988, and received January 26, 1988.

AC 62-107858

6. Mr. J. L. Sipple's letter dated January 22, 1988, and received January 26, 1988.
7. Mr. R. Andreu's letter and attachments dated July 21, 1987, and received July 22, 1987.

This letter must be attached to your construction permits, Nos. AC 62-107857 and -107858, and shall become a part of the permits.

Sincerely,

Dale Twachtmann
Secretary

DT/ks

cc: B. Stewart, NE Dist.
B. Pittman, Esq.
R. Andreu, BCC

ATTACHMENT 4 FOR AC 62-107857
AND
ATTACHMENT 6 FOR AC 62-107858

1.25.88
Perry FL

First in cellulose

The Buckeye Cellulose Corporation

A Procter and Gamble Company

Mailing Address: Route 3 Box 260 Perry, Florida 32347 Phone: (904) 584-0121

January 22, 1988

DER

JAN 26

BAQM

Mr. Clair H. Fancy, Deputy Bureau Chief
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Request for Modifications to Causticizing Modernization Project
Permit Nos. AC62-107857 and AC62-107858

Dear Mr. Fancy:

This is to document our 1/22/88 phone conversation with Mr. Bruce Mitchell, during which we requested that our initial permit modification request letter and appropriate attachments (dated July 21, 1987) also be incorporated into the No. 4 lime kiln construction permit No. AC62-107858. This had been our original intent. Unfortunately, the request was inadvertently overlooked.

As we also discussed with Mr. Mitchell, the expiration dates for the above referenced permits should be extended until the modification requests are finalized and the appropriate operating permits are obtained.

Thank you for your consideration of this matter. If you have any further questions, please contact Mr. Ray Andreu at (904) 584-0347.

Very truly yours,

THE BUCKEYE CELLULOSE CORPORATION
a Procter & Gamble Company

J. L. Sipple
Plant Manager

JLS/RA:msw
3166L

Copied: Bruce Mitchell
Pradeep Raval
CHF/BT
1.26.88 mr

ATTACHMENT 7 FOR AC 62-107858

7.21.87
Perm, FL

First in cellulose

The Buckeye Cellulose Corporation

A Procter and Gamble Company

Mailing Address: Route 3 Box 260 Perry, Florida 32347 Phone: (904) 584-0121

July 21, 1987

DER

JUL 22 1987

BAQM

Mr. Clair H. Fancy, Deputy Bureau Chief
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Request for Modifications to Causticizing Modernization Project
Permit Nos. AC62-1007857 and AC62-1007858

Since the EPA recognizes construction permits as the only federally enforcable documents, our objective is to insure that our construction permits are as accurate as possible. As a result, we are requesting some modifications to the two permits referenced above, to reflect actual, "as built" information.

The changes being requested are non-substantive in nature and have been reviewed with Mr. Bruce Mitchell. In fact, Mr. Mitchell was informed of all changes throughout the construction process.

In order to facilitate your review process, we have modified and enclosed each page in the construction permit package, in which a change is being requested. To help you identify the specific modifications, changes involving all support documents have been underlined. In the case where numerical changes were made in the various tables, these changes have been highlighted by using the symbol (#).

As we are currently in the process of applying for the operating permits, we would appreciate an expeditious reply. If you have any questions, please contact Mr. Jim Farmer of our Plant Environmental Group @ (904) 584-0333 or Ms. Julia Wood of our Divisional Environmental Group @ (901) 320-8458.

Thank you for consideration of this matter.

Very truly yours,

THE BUCKEYE CELLULOSE CORPORATION
a Procter & Gamble Company

R. Andreu
Environmental Control Manager

RA:msw
2804L
Attachments

cc: Mr. Bruce Mitchell (3)
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Mr. William P. Stewart
Air Section Supervisor
Northeast District
Department of Environmental Regulation
3426 Bills Road
Tallahassee, FL 32207

Changes to Buckeye Causticizing Modernization Permit

AC62-107857

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

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

Description (dry)	Contaminants Type	Contaminants % Wt	Utilization Rate - lbs/hr	Relate to Flow Diagram
Green Liquor Solid	Particulate	100%	177,000 #	1a plus 1b
Lime Product	Particulate	100%	59,240 #	3a plus 3b
Water Treatment Lime Mud	Particulate	100%	9,673	25
Kiln Lime Product	Particulate	100%	54,167	14a plus 14b
Purchased Lime Product	Particulate	100%	44,000 #	15a plus 15b

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

1. Total Process Input Rate (lbs/hr): See Attachment A

2. Product Weight (lbs/hr): See page 4b of 12

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] Maximum lbs/hr	Emission[1] Actual T/yr	Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission lbs/yr	Potential[4] Emission T/yr	Relate to Flow Diagram
Particulate	2.08	9.13	Process Wt. Table*	37.1 lb/hr ~~36.6~~	20.8	91.2	2
TRS as H_2S	2.27	0.081	NA	NA	2.27	0.081	7
TRS as H_2S	2.27	0.066	NA	NA	2.27	0.066	9
Particulate	0.343	1.50	Process Wt. Table*	27.8-34.2	343	1502	16
Particulate	0.103	0.451	Process Wt. Table*	24.4	103	451	20

[1]See Section V, Item 2.

*$E = 17.31\ P^{0.16}$ for $P \geq 30$ TPH

$E = 3.59\ P^{0.62}$ for $P \leq 30$ TPH

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

- Revised 7/16/87

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		
Lime Product:				
- Purchased	Particulate	100	22,000 #	19
- Kiln Product	Particulate	100	14,000 #	18

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

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

[1]See Section V, Item 2.

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

- Revised 7/16/87

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Micro-Pulsair 100S-10TR				
Equip. #08-1109 #	Particulate	99.9%	Submicron	See Att.B-2
Fuller Co. 36FR8				
Equip. #07-161 #	Particulate	99.9%	Submicron	See Att. B-2
Enso Slakers Scrubber 2X600/800 #				
Equip. #08-1022 #	Particulate	90%+	10 μ +	See Att.B-4

E. Fuels

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 NA Maximum _____

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

All collected lime dust will be recycled back into lime bins.

Grits from the two slakers (Streams 5a and 5b) and dregs and $CaCO_3$ from dregs filter (Stream 24) go to onsite solid waste disposal or process sewer#. All liquid wastes are either recycled or go to NPDES treatment system.

- Revised 7/16/87

Revised 7/16/87

I. NEW SLAKERS

A. PARTICULATE MATTER EMISSIONS

1. MAXIMUM EMISSIONS

Based on one slaker vendor's information, total particulate emissions from slaking would be 5.0 lb/day. Other vendors could vary from this level. Therefore, maximum emissions are calculated at ten times this level.

5.0 lb/day x 10 / 24 hr/day = 2.08 lb/hr PM

2.08 lb/hr x 8,760 hr/yr / 2,000 lb/ton = 9.13 TPY PM

2. ALLOWABLE EMISSIONS

Based on process weight table, $E = 17.31\ P^{0.16}$ for P 30 TPH
Input to slakers consists of green liquor (Stream 1) and lime (Stream 3):

Maximum green liquor solids to slaking (Streams 1a plus 1b)
= 177,000 lb/hr = 88.5 TPH

Maximum lime product to slaking (Streams 3a plus 3b)
= 59,240 lb/hr = 29.62 TPH

Maximum total process input rate = 118.12 TPH

$E = 17.31\ (118.12)^{0.16} = 37.1$ lb/hr PM

3. POTENTIAL EMISSIONS

Scrubber on slakers rated at 90% or greater efficiency
2.08 lb/hr / 0.10 = 20.8 lb/hr = 91.2 TPY PM

B. PRODUCT RATE

Slakers product rate = Lime mud + white liquor

Assuming grits are negligible, the slaker product rate equals process input rate to slakers = 118.12 TPH = 236,240 lb/hr.

II. LIME TRANSFER TO CAUSTICIZING LIME BINS

PARTICULATE MATTER

1. MAXIMUM EMISSIONS

One baghouse controls dust from both lime bins

Manufacturer's data: 0.02 gr/scf @ 2,000 scfm (see Attachment B-2)

0.02 gr/scf x 2,000 scf/min x 60 min/hr / 7,000 gr/lb

= 0.343 lb/hr = 1.50 TPY PM

2. ALLOWABLE EMISSIONS

Process weight table, $E = 17.31\ P^{0.16}$ for $P \geq 30$ TPH

$E = 3.59\ P^{0.62}$ for $P \leq 30$ TPH

a. Maximum process rate from No. 4 Lime Kiln into bins (Stream 14a + 14b) = 650 TPD

= 27.083 TPH

$E = 3.59\ (27.083)^{0.62} = 27.8$ lb/hr PM

b. Maximum process rate from trucks at 44 TPH (two unloading spots may operate at the same time at 22 TPH each) (total of Streams 15a and 15b).
$E = 17.31\ (44)^{0.16} = 31.7$ lb/hr PM

c. The maximum process rate will occur when operating two truck unloading spots and simultaneously operating the kiln.

$E = 17.31\ (27.083 + 44)^{0.16} = 34.2$ lb/hr PM

3. POTENTIAL EMISSIONS (Before Control)

Baghouse rated at 99.9% efficiency

0.343 lb/hr / (1-0.999) = 343 lb/hr = 1,502 TPY PM

III. LIME TRANSFER TO WATER TREATMENT BINS

PARTICULATE MATTER

1. MAXIMUM EMISSIONS

Baghouse rated at 1851 scfm and 0.02 gr/scf (see Attachment B-2)
0.02 gr/scf x 1851 scfm x 60 min/hr / 7,000 gr/lb = 0.317 lb/hr

Assume baghouse operates at all times (worst case):
0.317 lb/hr x 8,760 hr/yr / 2,000 lb/ton = 1.388 TPY PM

2. ALLOWABLE EMISSIONS

Process weight table, $E = 3.59\ P^{0.62}$ for P 30 TPH

Maximum transfer rate = 22 TPH (Stream 19)

$E = 3.59\ (22)^{0.62} = 24.4$ lb/hr PM

3. POTENTIAL EMISSIONS

Assume 99.9% efficiency on baghouse

0.317 lb/hr / (1-0.999) = 317 lb/hr = 1388 TPY PM

V. WHITE LIQUOR PRESSURE FILTER

ESTIMATED TRS EMISSIONS

Total TRS emissions are considered to be insignificant but can be calculated as follows:

1. NORMAL OPERATION--Based on design engineering information supplied by project engineers:

1,400 acfm @ 210°F
H_2S = 2 ppm

$PV = mRT$ $\quad m = PV/RT$
R = 1,545 ft-lb_f/lb mole-°R
MW H_2S = 34
R = 45.4 ft-lb_f/lb_m-°R

$$m = \frac{(14.7 \times 144)lb_f}{ft^2} \times \frac{1{,}400\ ft^3}{min} \times \frac{lb_m\text{-}^oR}{45.4\ ft\text{-}lb_f} \times \frac{1}{(210+460)^oR} \times$$

$$\frac{60\ min}{hr} \times \frac{2.0}{10^6} = 0.0117\ lb/hr\ TRS\ as\ H_2S$$

$$0.0117\ \frac{lb}{hr} \times \frac{8{,}760\ hr}{yr} \Big/ \frac{2{,}000\ lb}{ton} = 0.051\ TPY\ TRS\ as\ H_2S$$

Actual vent installation incorporated a simple steam eductor to provide the vent draft instead of a fan. Therefore, actual exit volume and temperatures are higher; approximately 350°F (50 psig steam) and are saturated with moisture. No increase in TRS emissions is expected from the steam eductor.

2. ACID WASHING

TRS fugitive emissions occur during the first 2 to 5 minutes of the 8-hour acid wash cycle. Acid wash frequency may be as frequent as once every two weeks. Based on 2 ft^3 of white liquor residing in a drained filter before acid washing:

Total TRS as H_2S = 0.0026 + 0.0057 = 0.0083 lb/hr

0.0083 lb/hr x 8,760 hr/yr / 2,000 lb/ton = 0.036 TPY TRS as H_2S

Actual vent installation incorporated a simple steam eductor to provide the vent draft instead of a fan. Therefore actual exit volume and temperatures are higher; approximately 350°F (50 psig steam) and are saturated with moisture. No increase in TRS emissions is expected from the steam eductor.

2. ACID WASHING

Frequency of acid washing of lime mud pressure filter will be the same as for the white liquor pressure filter (i.e., once every 2 weeks). The basis of emissions is also the same as for the white liquor pressure filter (i.e., 2 ft^3 of white liquor in filter).

TRS emissions = 0.030 TPY TRS as H_2S

3. TOTAL TRS

0.036 + 0.030 = 0.066 TPY TRS as H_2S

VII. LIME MUD PRECOAT FILTERS

1. NORMAL OPERATIONS

Based on field tests, Eurocan Pulp and Paper in Kitimat B.C., Canada, has developed fugitive TRS emission estimates for precoat filters. For a 900 gpm white liquor production at 31 percent sulfidity, estimated TRS emissions are 9 lb/day. It is reasonable to assume emissions are directly related to sulfidity and throughput.

Therefore, for the new precoat filters operating at an average of 1,200 gpm white liquor with 27 percent sulfidity, calculated TRS emissions are:

a. $\frac{27}{31} = \frac{x}{9}$ x = 7.8 lb/day at 27% sulfidity

then:

$\frac{1,200}{900} = \frac{x}{7.8}$ x = 10.4 lb/day at 1,200 gpm and 27% sulfidity

b. 10.4 lb/day / 24 hr/day = 0.433 lb/hr TRS as H_2S

c. 10.4 lb/day x $\frac{365 \text{ day}}{\text{yr}}$ / $\frac{2,000 \text{ lb}}{\text{ton}}$ = 1.90 TPY TRS as H_2S

The precoat filters selected have hoods with a natural draft moisture vent. The units are in an enclosed building to minimize fugitive dust emissions from dewatered lime mud conveyors. Hood vents exit the building to prevent moisture from the filter hot water sprays from condensing in the building.

2. ACID WASHING

The frequency of acid washing each precoat filter could be as great as twice per week. Because of the method of acid washing, it is expected that total volume of residual white liquor per wash will be about 25 percent of the white liquor pressure filter or 0.25 x 2 ft^3 = 0.5 ft^3.

VIII. DREGS FILTERS

FUGITIVE TRS EMISSIONS

1. NORMAL OPERATION

The information from Eurocan Pulp and Paper includes an estimate for dregs filter fugitive TRS emissions at 75 percent of the lime mud precoat filter emissions. Calculated emissions then are:

0.75×10.4 lb/day = 7.80 lb/day

7.80 / 24 hr/day = 0.325 lb/hr TRS as H_2S

$$7.80 \text{ lb/day} \times \frac{365 \text{ days/year}}{2{,}000 \text{ lb/ton}} = 1.424 \text{ TPY TRS as } H_2S$$

2. ACID WASHING

The dregs filter could be acid washed up to twice per month. Emissions are calculated based on 75 percent of the emissions from the white liquor pressure filters. Calculated emissions are:

$$0.75 \times 2.27 \text{ lb } H_2S/\text{wash} = \frac{1.70 \text{ lb}}{\text{wash}}$$

$$\frac{1.70 \text{ lb}}{\text{wash}} \times \frac{\text{"1" filter}}{} \times \frac{\text{"2" wash}}{\text{filter-month}} \times \frac{12 \text{ month}}{\text{year}} / 2{,}000 \text{ lb/ton}$$

= 0.020 TPY TRS as H_2S

C. TOTAL

1.424 + 0.020 = 1.34 TPY TRS as H_2S

Revised 7/16/87

Table B-1. EMISSION STACK GEOMETRY AND FLOW CHARACTERISTICS

Emission Point	Stack[2] Height (ft)	Stack Diameter (in)	Gas Flow Rate (ACFM)	Gas Flow Rate (DSCFM)	Exit Temp. (°F)	Water Vapor (%)	Exit Velocity (ft/s)
Slakers Stack[1]	133	23.375 ID	657	461	141	Saturated	3.7
Lime Kiln Bin Baghouse	124	12 NPS	2000	2000	Ambient - 350	Ambient	61.6
Water Treat Bin Baghouse	14.0	8 NPS	1851	1851	Ambient	Ambient	18.5
White Liquor Pressure Filter Vent	79.0	10 NPS	1400	775	375	Saturated	30-66
Lime Mud Pressure Filter Vent	79.0	10 NPS	1400	850	375	Saturated	30-66
Stand-by Pressure Filter Vent	79.0	10 NPS	When in use, the same as the white liquor or lime mud pressure filter vents.				
North Lime Mud Precoat Filter	76.0	24 NPS	650	484	131	Saturated	3.4
South Lime Mud Precoat Filter	76.0	24 NPS	650	484	131	Saturated	3.4

Source: Buckeye Cellulose, 1986

1. Based on slaker test data.
2. Above grade.

Revised 7/16/87

The following data is needed for environmental permitting of the Causticizing Modernization Project:

Water Treat Lime Bins

	East	West
Diameter	18' ID	18' ID
Height Above Grade	49'6"	59'6"
Volume in Cubic Feet	8890 CF	6348 CF
Volume in Tons Lime	249	178

Water Treat Lime Bin Baghouse, Equipment No. 07-161

Type of Control Equipment: Baghouse - Fuller Model 36FR8
Filter Size
  a. Square feet of filter cloth: 375
  b. Type of Bags: Polyester
Filter % Efficiency on Lime Dust: .02 Grains/SCF
Design Air Flow Rate, ASCFM: 1851 CFM at 14" Hg
Air: Cloth Ratio, ASCFM/Square Ft.: 4.94 ASCFM/SF
Cleaning: Pulse on demand
Dimensions of Baghouse: 4' diameter x 19' including conical hopper
Stack Diameter, Inches: 8"
Stack Height Above Grade: 14'
Grade Elevation Above Sea Level, Ft.: 54'6"
Manufacturer of Baghouse: Fuller Company
Design Housing MAP, In Hg: 17
Operating Differential Pressure, In Hg: 0-14

Causticizing New Lime Bin Baghouse, Equipment No. 08-1109

Type of Control Equipment: Micro-Pulsair 100S-10TR Baghouse
Filter Size
  a. Square feet of filter cloth: 1,178 (100 filter elements)
  b. Type of Bags: Polyester, 16 oz/ft^2, 275^oF
Filter % Efficiency on Lime Dust: 99.9%, 0.02 Grains/ACFT
Design Air Flow Rate, ASCFM: 2000
Air: Cloth Ratio, ASCFM/Square Ft.: 1.7
Cleaning: Pulse on demand
Dimensions of Baghouse: 72" x 72" x 207" including pyramidal hopper
Stack Diameter, Inches: 24"
Stack Height Above Grade: 133'
Grade Elevation Above Sea Level, Ft.: 55'0"
Manufacturer of Baghouse: Micro-Pulsair Mikropul Corp.
Design Housing MAP, In H_2O: 16
Operating Differential Pressure, In H^2O: 4-6

Revised 7/16/87

SLAKERS WET SCRUBBER DESIGN DATA

Scrubber type: direct contact condenser

Water pressure: 20 psig

Operating number of nozzles: 2 (one per slaker vent)

Design nozzles: 6 total; 2 per slaker vent and 2 after combined flow

Operating water flow rate: 60 to 90 gpm

Water temperature: less than 90°F

Efficiency: 90% minimum, per vendor information

Manufacturer: ENSO 2 x Ø600/300 (See B-4a and B-4b)

Equipment number: 08-1022

Slaker internal design will minimize dust carryover. Design features include:

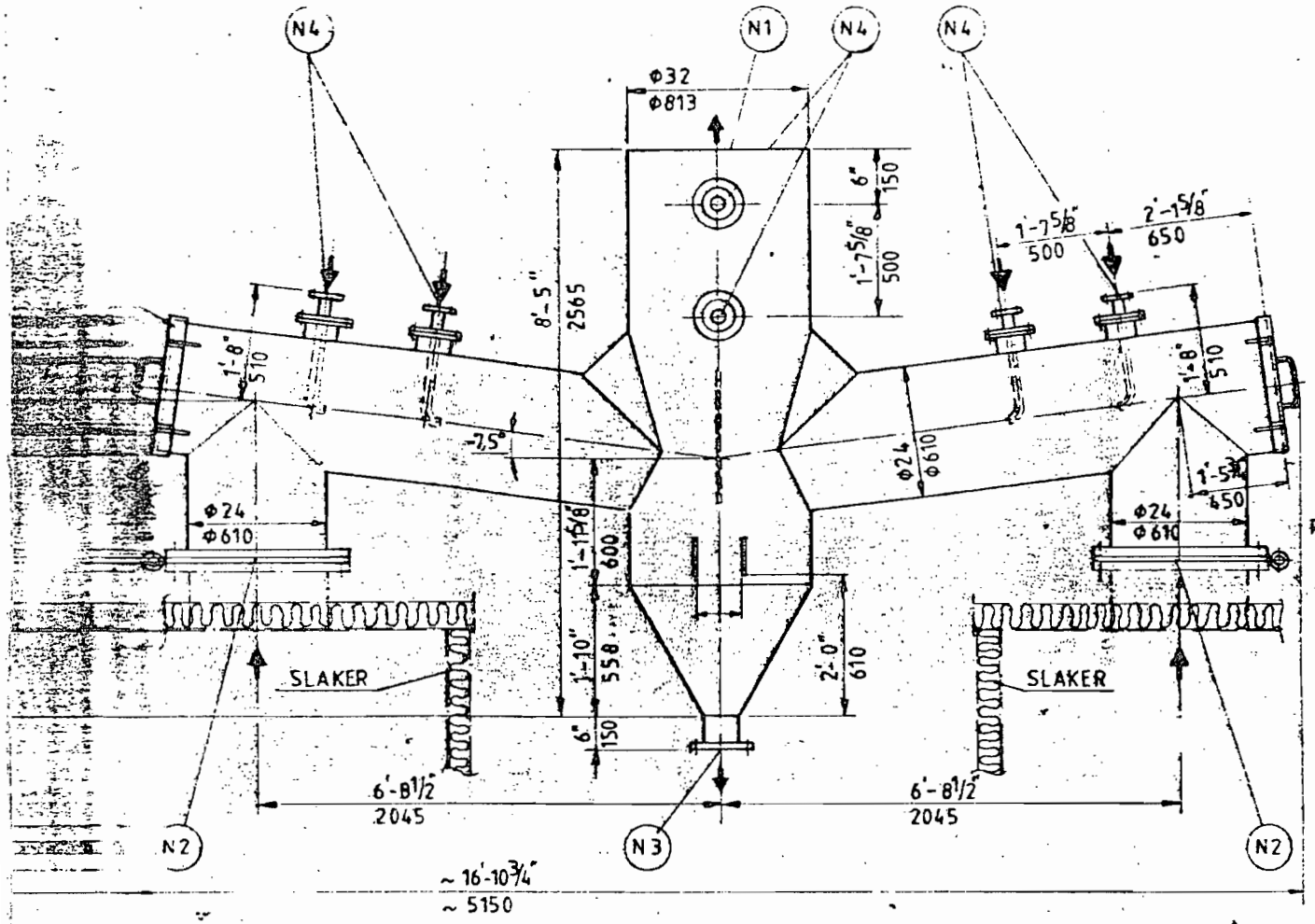
* Distance between lime feed chute and vent follow good engineering practice.

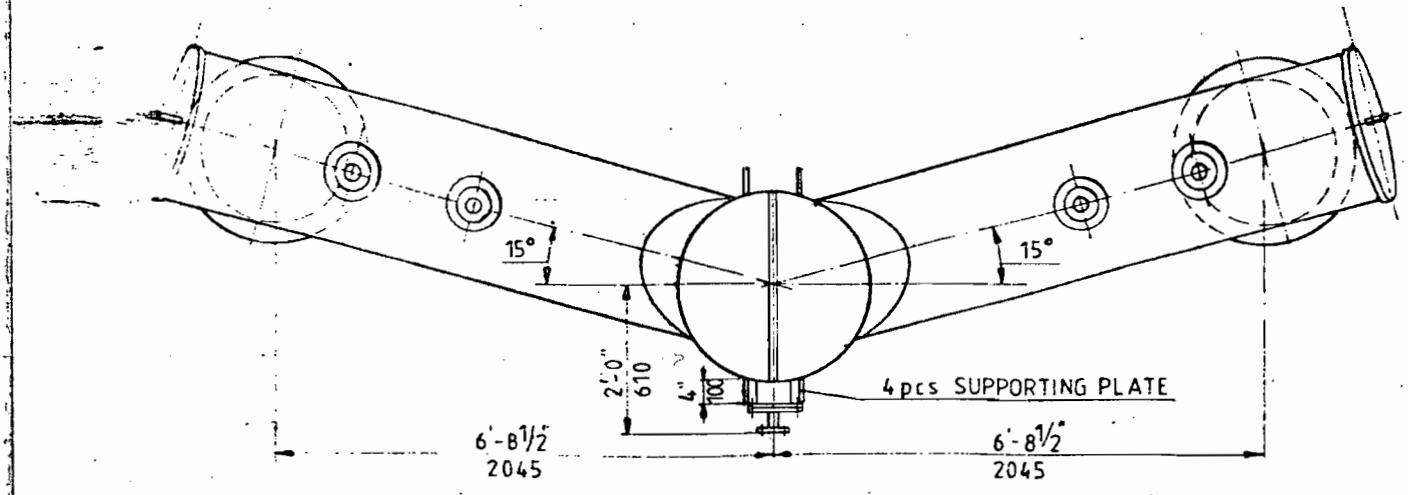
* Internal dust baffle suspended from roof between lime feed chute and grits conveyor reduces fugitive emissions.

* Slaker impeller is submerged.

* Enclosure of the slaker will be maximized to minimize the vent volume required to keep the slaker under negative pressure.

* The face velocity at the plenum of the slaker vent is low to minimize entrainment of dust in the exhaust gas stream.


N4
N1
N4
N4
Φ32
Φ813
8'-5"
2565
6"
150
1'-7⅝"
500
1'-7⅝"
500
2'-1⅝"
650
1'-8"
510
1'-8"
510
7,5°
Φ24
Φ610
Φ24
Φ610
1'-5¾"
450
1'-1⅝"
600
1'-10"
558
2'-0"
610
6"
150
SLAKER
SLAKER
RING-/BLINDFLANGE
6'-8½"
2045
6'-8½"
2045
N2
N3
N2
~ 16'-10¾"
~ 5150

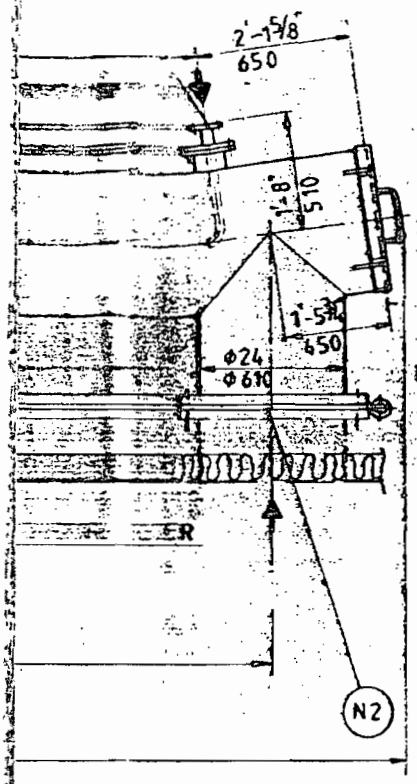

15°
15°
2'-0"
610
4"
100
4 pcs SUPPORTING PLATE
6'-8½"
2045
6'-8½"
2045

B-4a

7/14/97

NOZZLES

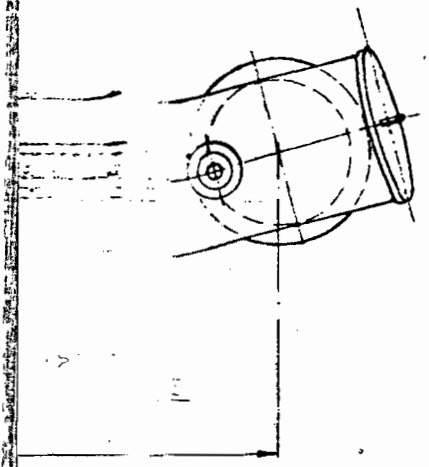
	SIZE		NUMBER	DRILLING	FACING	ORIENT	PROJ.	SERVICE
N 1	32"	DN800	1					VAPOUR
N 2	24"	DN600	2	150#				VAPOUR
N 3	6"	DN150	1	150#				WATER DRAIN
N 4	1½	DN 40	6	150#				MILL WATER
N 5								
N 6								
N 7								
N 8								
N 9								
N10								



FLOW: 28 GALL/MIN — 10 PSI/WATERNOZZLE
43,8 ---/--- — 30 ---/ ——"——

WEIGHT: 2500 kg
5500 lbs.

MATERIAL: AISI 304 L



AE 923-5423
JOB FILE FL-8-157
EQUIP. NO. 08-1022
P. O. NO. FL-89106

CERTIFIED
ENSO-GUTZEIT OY
Engineering Division
Date DEC. 19 1985
Signature

P.O. FL 89106 HBP
AE 923—S923
EQ No 08—1022

Scale 1:20	BUCKEYE CELLULOSE C.O.	Pos. osa
ENSO GUTZEIT OY ENGINEERING DIVISION SAVONLINNA FINLAND	SCRUBBER 2 × Φ600/800	1985-11-18
		6540044
		244708 B

B-46

7/16/87

Changes to Buckeye Causticizing Modernization Permit

AC62-107858

D. Control Devices: (See Section V, Item 4) (Section D precipitator information previously revised 1/17/86 in submittal)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Electrostatic Precipitator	Particulate	99.2%	Submicron	See Att. F,
(Vendor not yet selected)				pg. F-1, F-2
Process Controls	TRS	93.9%	Not Applicable	See Att. F,
				pg. F-3, F-4

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.170 MMCF	0.170 MMCF	176
No. 6 Fuel Oil	1214 gallons	1214 gallons	176

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

Fuel Analysis: No. 6 Fuel Oil* Natural Gas: 1,040 BTU/scf

Percent Sulfur: 2.5% maximum Percent Ash: 0.1 typical

Density: 8.1 lbs/gal Typical Percent Nitrogen: 0.4 based on 1 test

Heat Capacity: 17,901 BTU/lb 145,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): None

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

Annual Average None Maximum

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

Particulates collected in precipitator will be recycled dry back into the lime kiln (flow stream 11b). Grits from the two slakers (Streams 5a and 5b) and dregs and $CaCO_3$ from dregs filters (Stream 24) go to onsite solid waste disposal or process sewer. All liquid wastes go to NPDES treatment system.

* Includes small quantity of used oil generated at the facility and burned as fuel. Oil does not contain PCB's.

The process flow diagram (Figure A-1) details the flow of materials and air emission points. A flow diagram (Figure A-2) is also provided for the existing systems.

The new causticizing system will consist of the following:

1. The existing Nos. 2, 3, and 4 smelt tanks will feed an existing tank, newly converted to be a surge tank. The surge tank will feed two existing tanks, newly converted to be green liquor clarifiers. A new dregs filter will support the green liquor clarifiers. The dregs filter is a fugitive total reduced sulfur (TRS) emission source.

2. Two new lime slakers, equipped with a condensing scrubber, will replace the existing pre-slakers and slakers. The new slakers and existing pre-slakers are sources of particulate (PM) emissions (Stream 2; refer to Figure A-1).

3. A new causticizing line will replace two existing causticizing lines.

4. The existing white liquor clarifiers, lime mud washers, mud precoat filter, and centrifuges and belt filters will be replaced by a white liquor pressure filter, a lime mud pressure filter, and two lime mud precoat filters. A third new pressure filter will be installed as a standby for the two new pressure filters. The new mud precoat filters will be fed from the lime mud surge tank after the lime mud pressure filter (Stream 10). Lime mud from water treatment (Stream 25) will also feed the surge tank. The new white liquor, lime mud pressure filters, and standby pressure filter are vented to the atmosphere and are TRS emission points (Streams 7a and 9). The new lime mud precoat filters are TRS emission sources.

5. The three existing lime kilns and the existing calciner, all with venturi scrubbers (total permitted lime product capacity of 784 TPD), will be replaced by a single 650-TPD lime product kiln with an electrostatic precipitator. This new lime kiln (No. 4

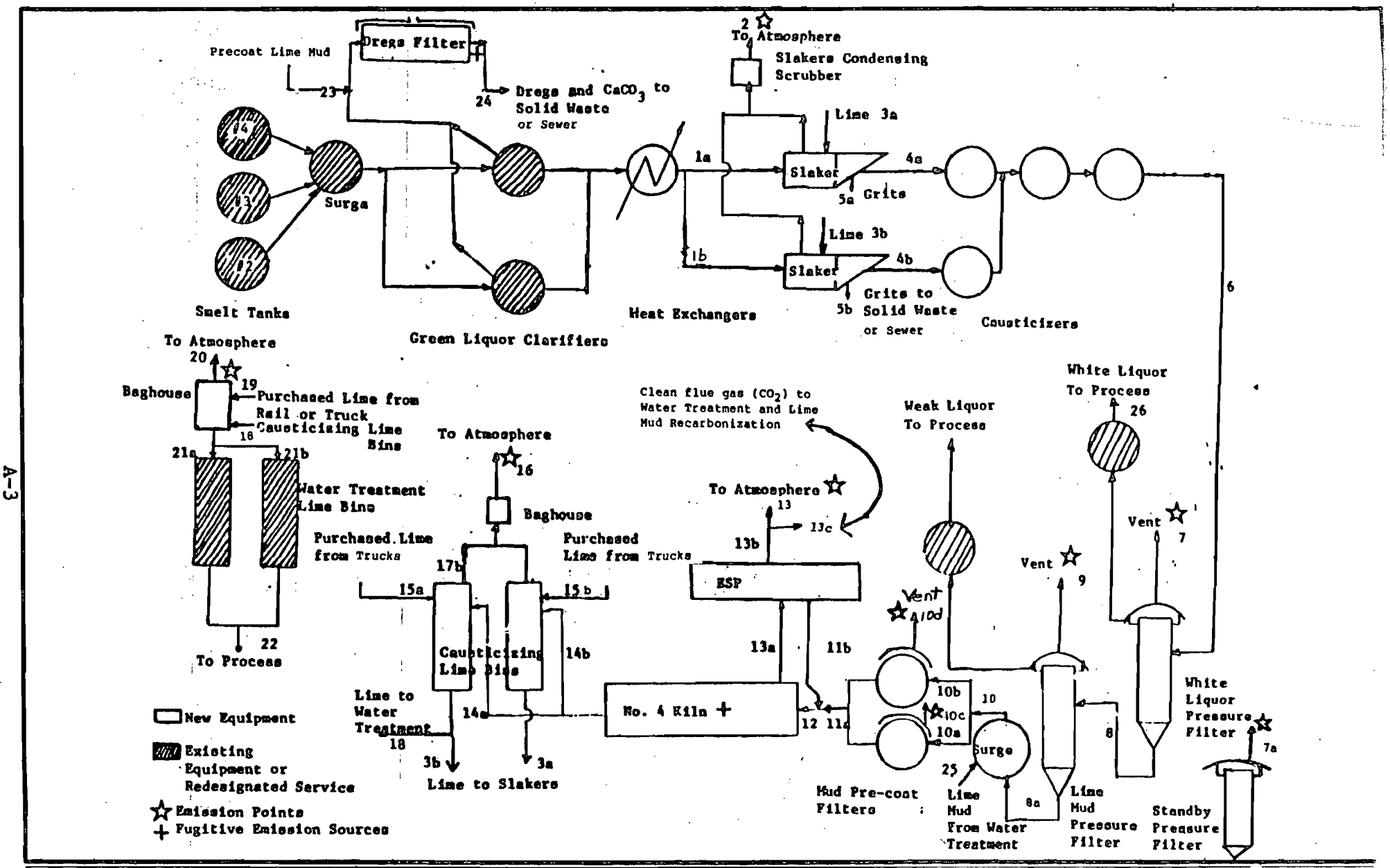


Figure A-1
CONCEPTUAL FLOW DIAGRAM — PROPOSED CAUSTICIZING SYSTEM
Revised 7/16/87

Buckeye Cellulose Corporation

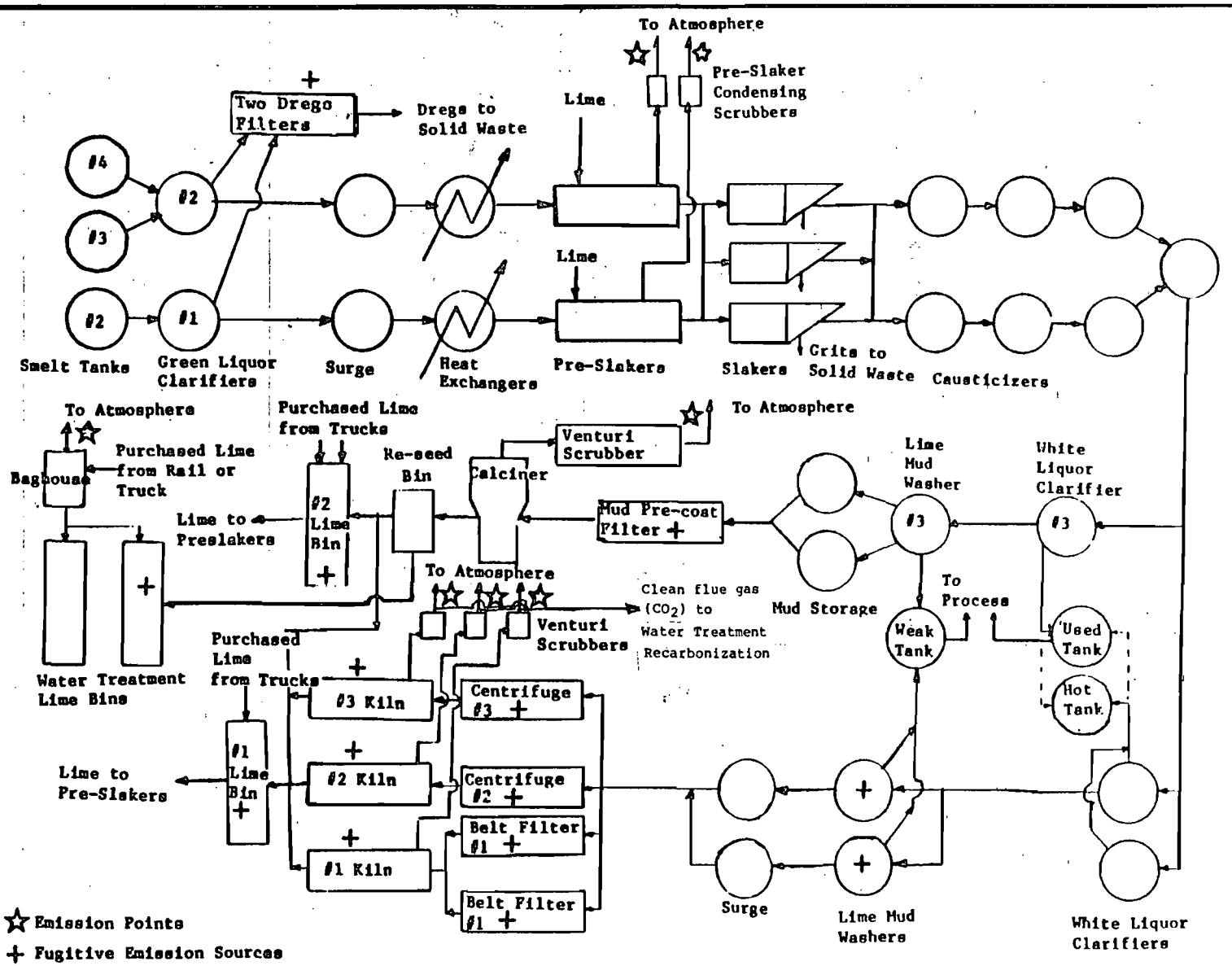


Figure A-2
CONCEPTUAL FLOW DIAGRAM — EXISTING CAUSTICIZING SYSTEM

Revised 7/16/87

Buckeye Cellulose Corporation

Lime Kiln) will be a source of PM, TRS, sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) (Stream 13b). As with the old kilns, about 600 scfm clean fluegas (after the precipitator and continuous TRS / O_2 emission monitor) will continue to be directed to the existing fluegas compressor (Stream 13c). The clean fluegas contains CO_2. About 450 scfm is used to recarbonate lime softened water supplies. About 450 scfm will be used to recarbonate water treatment lime mud (Stream 25).

6. The two existing causticizing lime bins, currently uncontrolled, will be replaced by two new causticizing lime bins, dust controlled by a single baghouse. The new causticizing lime bins will be sources of PM (Stream 16). The lime bins will receive lime from the kiln by bucket elevator (Streams 14a and b) and purchased lime by truck through pneumatic conveyors (Streams 15a and 15b). Lime will be transferred to the lime slakers (Streams 3a and b) by gravity feed or to the water treatment lime bins by pneumatic conveyoring (Stream 18).

7. The two existing water treatment lime bins will continue to be used for lime storage for water treatment. Currently, the existing baghouse controls dust emissions while lime is loaded into only one bin. The conveying system will be modified such that in the future the baghouse will control emissions (Stream 20) when loading lime into both bins (Streams 18 and 19). The water treatment lime bins will be capable of receiving purchased lime from rail or truck (Stream 19) or lime from the causticizing lime bins (Stream 18), all through pneumatic conveyors.

A site location map of the Buckeye Cellulose plant is presented in Figure A-3. A plot plan of the facility is shown in Figure A-4. Figures A-4 and A-5 detail the locations of the proposed emission points.

Construction of the new system is scheduled to begin as early as October 1985 and should be completed within two years.

This air construction permit application addresses the new No. 4 lime kiln. In addition, a Prevention of Significant Deterioration (PSD) source applicability analysis is presented, which quantifies emissions of regulated pollutants from the new sources and from the existing sources which will be shut down or modified. A companion air construction permit application addresses minor source emissions and fugitive emissions from the proposed project.

2.0 TRS CONTROL

Process design and control is the foundation of good TRS control. Best Demonstrated Technology (BDT) has long recognized the importance of such factors as good mud washing and good kiln combustion control to achieve good TRS control. The system design will provide TRS control equal to or better than BDT. We understand that it will be necessary to meet this level of control or retrofitting or replacement will be expected.

2.1 PRECOAT FILTER

The precoat filter size will be equal to or greater than BDT to assure good oxidation of the sulfides. Hot clean water will be used for washing. Fines from the ESP will be recycled in dry form directly to the kiln feed, bypassing the precoat filter. This removes some mud load from the filter and reduces plugging caused by fine particles, thereby improving filter effectiveness.

2.2 MUD WASHING

White liquor clarification and mud washing will be accomplished through the use of pressure filters. Pressure filters produce a higher solids mud than can be produced by conventional clarifiers. The higher solids mud allows greater dilution hence better washing thereby reducing residual chemicals in the lime mud feed to the kiln. This new technology also provides tighter process control and reliability than conventional clarifiers.

2.3 INERTS

Green liquor equipment included in this project will provide surge capacity and double the effective clarifier capacity. The improved green liquor quality will result in lower inerts in the lime mud, and thereby improve lime mud filterability. The lime mud from the water treatment softeners characteristically is high in inerts. Therefore prior to recycling, water treatment lime mud (Stream 25) will be recarbonated with clean flue gas (CO_2), and centrifuged to remove the centrate which is high in inerts. The recarbonation improves the filterability characteristics allowing good mud washing on the precoat filter.

Therefore, this lower level of inerts in the lime mud feed means lower TRS emissions from the lime kiln.

2.4 KILN COMBUSTION

The design will include O_2 measurement in the stack and kiln plus cold end temperature measurement. Improved seals will reduce air in leakage thereby providing better kiln combustion control. The new kiln will be of modern, energy-efficient design.

2.5 ESTIMATED CONTROL EFFICIENCY

From Attachment B, maximum TRS emissions = 3.28 lb/hr TRS as H_2S

Potential TRS emissions = 53.5 lb/hr TRS as H_2S

Efficiency = (53.5 - 3.28)/53.5 x 100 = 93.9%

AC 62-140034
#1000.00 (9-15-87) mail room
BAQM rcd (9-14-87)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

DER
SEP 14 1987
BAQM

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Causticizing System and Lime Handling [X] New[1] [ ] Existing[1]

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

COMPANY NAME: The Buckeye Cellulose Corporation COUNTY: Taylor

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) Lime Bins, Slakers, White Liquor and Lime Mud Pressure Filters and Fugitives*

SOURCE LOCATION: Street 5 to 6 miles S.E. of Perry City Perry

UTM: East 256,740 North 3328.700

Latitude 30 ° 03 ' 59 "N Longitude 83 ° 33 ' 12 "W

APPLICANT NAME AND TITLE: Mr. John L. Sipple, Plant Manager

APPLICANT ADDRESS: Route 3, Box 260; Perry, FL 32347

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of The Buckeye Cellulose Corp.

I certify that the statements made in this application for a construction/modification 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: John L. Sipple

John L. Sipple, Plant Manager
Name and Title (Please Type)

Date: 8/11/87 Telephone No. (904) 584-0121

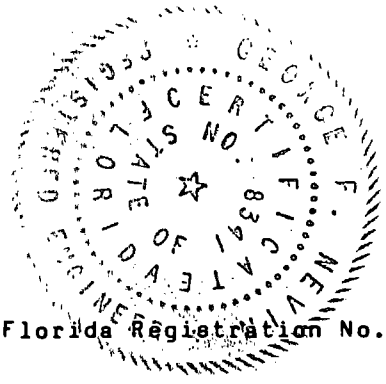
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

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)

*This permit covers ancillary equipment and is a companion permit application to the No. 4 Lime Kiln application.

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 George F. Nevin

George F. Nevin
Name (Please Type)

Watkins Engineers and Constructors
Company Name (Please Type)

P.O. Box 2194; Tallahassee, FL 32316
Mailing Address (Please Type)

Florida Registration No. 8341 Date: 9/10/87 Telephone No. (904) 576-7181

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 reault in full compliance. Attach additional sheet if necessary.

See No. 4 Lime Kiln application, Attachment A.

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

Start of Construction October 1985 Completion of Construction October 1987

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.)

See No. 4 Lime Kiln application.

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? No

   a. If yes, has "offset" been applied? --

   b. If yes, has "Lowest Achievable Emission Rate" been applied? --

   c. If yes, list non-attainment pollutants. --

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

3. Does the State "Prevention of Significant Deterioriation" (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? No

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 (dry)	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Green Liquor Solid	Particulate	100%	177,000 #	1a plus 1b
Lime Product	Particulate	100%	59,240 #	3a plus 3b
Water Treatment Lime Mud	Particulate	100%	9,673	25
Kiln Lime Product	Particulate	100%	54,167	14a plus 14b
Purchased Lime Product	Particulate	100%	44,000 #	15a plus 15b

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

1. Total Process Input Rate (lbs/hr): See Attachment A

2. Product Weight (lbs/hr): See page 4b of 12

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	2.08	9.13	Process Wt. Table*	36.6	20.8	91.2	2
TRS as H_2S	2.27	0.081	NA	NA	2.27	0.081	7
TRS as H_2S	2.27	0.066	NA	NA	2.27	0.066	9
Particulate	0.343	1.50	Process Wt. Table*	27.8-34.2	343	1502	16
Particulate	0.103	0.451	Process Wt. Table*	24.4	103	451	20

[1]See Section V, Item 2.

*$E = 17.31\ P^{0.16}$ for $P \geq 30$ TPH

$E = 3.59\ P^{0.62}$ for $P \leq 30$ TPH

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

- Revised 7/16/87

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		
Lime Product:				
- Purchased	Particulate	100	44,000 #	19
- Kiln Product	Particulate	100	14,000 #	18

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

1. Total Process Input Rate (lbs/hr): _____

2. Product Weight (lbs/hr): _____

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[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

[1]See Section V, Item 2.

[2]Reference applicsble 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)

[3]Calculated from operating rate and applicable standard.

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

- Revised 7/16/87

PRODUCT RATES

DESCRIPTIONS	PRODUCT (lb/hr dry)	RELATE TO FLOW DIAGRAM
White Liquor	113,150	26
Lime Mud to Kiln	96,726	11a
Lime Product to Water Treat.	5,417 Average	22
Lime Product to Slakers	56,430	3a plus 3b
Lime Product	44,000	18

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Micro-Pulsair 100S-10TR				
Equip. #08-1109 #	Particulate	99.9%	Submicron	See Att.B-2
Fuller Co. 36FR8				
Equip. #07-161 #	Particulate	99.9%	Submicron	See Att. B-2
Enso Slakers Scrubber 2X0600/800 #				
Equip. #08-1022 #	Particulate	90%+	10 μ +	See Att.B-4

E. Fuels

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 NA Maximum _____

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

All collected lime dust will be recycled back into lime bins.

Grits from the two slakers (Streams 5a and 5b) and dregs and $CaCO_3$ from dregs filter (Stream 24) go to onsite solid waste disposal or process sewer#. All liquid wastes are either recycled or go to NPDES treatment system.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):
See Attachment B-1.

Stack Height: _____ 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 Diamter: _____ 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 A

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 A

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

   See Attachment A

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 Attachment B

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 Attachment B

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 No. 4 Lime Kiln Application, 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).

   See No. 4 Lime Kiln Application, Attachment A

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.

   See No. 4 Lime Kiln Application, Attachment A

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation. Check attached.

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. Not Applicable.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY Not Applicable

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] 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

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

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:

2.

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:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

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:

[1]Explain method of determining efficiency.
[2]Energy 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:

[1]Applicant 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 _____( ) SO^{2}* _____ 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.

I. NEW SLAKERS

A. PARTICULATE MATTER EMISSIONS

1. MAXIMUM EMISSIONS

Based on one slaker vendor's information, total particulate emissions from slaking would be 5.0 lb/day. Other vendors could vary from this level. Therefore, maximum emissions are calculated at ten times this level.

5.0 lb/day x 10 / 24 hr/day = 2.08 lb/hr PM

2.08 lb/hr x 8,760 hr/yr / 2,000 lb/ton = 9.13 TPY PM

2. ALLOWABLE EMISSIONS

Based on process weight table, $E = 17.31\ P^{0.16}$ for P 30 TPH
Input to slakers consists of green liquor (Stream 1) and lime (Stream 3).

Maximum green liquor solids to slaking (Streams 1a plus 1b)
= 177,000 lb/hr = 88.5 TPH

Maximum lime product to slaking (Streams 3a plus 3b)
= 59,240 lb/hr = 29.62 TPH

Maximum total process input rate = 118.12 TPH

$E = 17.31\ (118.12)^{0.16} = 37.1$ lb/hr PM

3. POTENTIAL EMISSIONS

Scrubber on slakers rated at 90% or greater efficiency
2.08 lb/hr / 0.10 = 20.8 lb/hr = 91.2 TPY PM

B. PRODUCT RATE

Slakers product rate = Lime mud + white liquor

Assuming grits are negligible, the slaker product rate equals process input rate to slakers = 118.12 TPH = 236,240 lb/hr.

II. LIME TRANSFER TO CAUSTICIZING LIME BINS

PARTICULATE MATTER

1. MAXIMUM EMISSIONS

One baghouse controls dust from both lime bins

Manufacturer's data: 0.02 gr/scf @ 2,000 scfm (see Attachment B-2)

0.02 gr/scf x 2,000 scf/min x 60 min/hr / 7,000 gr/lb

= 0.343 lb/hr = 1.50 TPY PM

2. ALLOWABLE EMISSIONS

Process weight table, $E = 17.31\ P^{0.16}$ for $P \geq 30$ TPH

$E = 3.59\ P^{0.62}$ for $P \leq 30$ TPH

a. Maximum process rate from No. 4 Lime Kiln into bins (Stream 14a + 14b) = 650 TPD

= 27.083 TPH

$E = 3.59\ (27.083)^{0.62}$ = 27.8 lb/hr PM

b. Maximum process rate from trucks at 44 TPH (two unloading spots may operate at the same time at 22 TPH each) (total of Streams 15a and 15b).
$E = 17.31\ (44)^{0.16}$ = 31.7 lb/hr PM

c. The maximum process rate will occur when operating two truck unloading spots and simultaneously operating the kiln.

$E = 17.31\ (27.083 + 44)^{0.16}$ = 34.2 lb/hr PM

3. POTENTIAL EMISSIONS (Before Control)

Baghouse rated at 99.9% efficiency

0.343 lb/hr / (1-0.999) = 343 lb/hr = 1,502 TPY PM

III. LIME TRANSFER TO WATER TREATMENT BINS

PARTICULATE MATTER

1. MAXIMUM EMISSIONS

Baghouse rated at 1851 scfm and 0.02 gr/scf (see Attachment B-2)
0.02 gr/scf x 1851 scfm x 60 min/hr / 7,000 gr/lb = 0.317 lb/hr

Assume baghouse operates at all times (worst case):
0.317 lb/hr x 8,760 hr/yr / 2,000 lb/ton = 1.388 TPY PM

2. ALLOWABLE EMISSIONS

Process weight table, $E = 3.59\ P^{0.62}$ for $P \geq 30$ TPH

Maximum transfer rate = 22 TPH (Stream 19)

$E = 3.59\ (22)^{0.62} = 24.4$ lb/hr PM

3. POTENTIAL EMISSIONS

Assume 99.9% efficiency on baghouse

0.317 lb/hr / (1-0.999) = 317 lb/hr = 1388 TPY PM

V. WHITE LIQUOR PRESSURE FILTER

ESTIMATED TRS EMISSIONS

Total TRS emissions are considered to be insignificant but can be calculated as follows:

1. NORMAL OPERATION--Based on design engineering information supplied by project engineers:

1,400 acfm @ 210°F
H_2S = 2 ppm

$PV = mRT \qquad m = PV/RT$
R = 1,545 ft-lb_f/lb mole-°R
MW H_2S = 34
R = 45.4 ft-lb_f/lb_m-°R

$$m = \frac{(14.7 \times 144)\,lb_f}{ft^2} \times \frac{1{,}400\ ft^3}{min} \times \frac{lb_m\text{-}^\circ R}{45.4\ ft\text{-}lb_f} \times \frac{1}{(210+460)^\circ R} \times$$

$$\frac{60\ min}{hr} \times \frac{2.0}{10^6} = 0.0117\ lb/hr\ TRS\ as\ H_2S$$

$$0.0117\ \frac{lb}{hr} \times \frac{8{,}760\ hr}{yr} \Big/ \frac{2{,}000\ lb}{ton} = 0.051\ TPY\ TRS\ as\ H_2S$$

Actual vent installation incorporated a simple steam eductor to provide the vent draft instead of a fan. Therefore, actual exit volume and temperatures are higher; approximately 350°F (50 psig steam) and are saturated with moisture. No increase in TRS emissions is expected from the steam eductor.

2. ACID WASHING

TRS fugitive emissions occur during the first 2 to 5 minutes of the 8-hour acid wash cycle. Acid wash frequency may be as frequent as once every two weeks. Based on 2 ft^3 of white liquor residing in a drained filter before acid washing:

Total TRS as H_2S = 0.0026 + 0.0057 = 0.0083 lb/hr

0.0083 lb/hr x 8,760 hr/yr / 2,000 lb/ton = 0.036 TPY TRS as H_2S

Actual vent installation incorporated a simple steam eductor to provide the vent draft instead of a fan. Therefore actual exit volume and temperatures are higher; approximately 350°F (50 psig steam) and are saturated with moisture. No increase in TRS emissions is expected from the steam eductor.

2. ACID WASHING

Frequency of acid washing of lime mud pressure filter will be the same as for the white liquor pressure filter (i.e., once every 2 weeks). The basis of emissions is also the same as for the white liquor pressure filter (i.e., 2 ft^3 of white liquor in filter).

TRS emissions = 0.030 TPY TRS as H_2S

3. TOTAL TRS

0.036 + 0.030 = 0.066 TPY TRS as H_2S

VII. LIME MUD PRECOAT FILTERS

1. NORMAL OPERATIONS

Based on field tests, Eurocan Pulp and Paper in Kitimat B.C., Canada, has developed fugitive TRS emission estimates for precoat filters. For a 900 gpm white liquor production at 31 percent sulfidity, estimated TRS emissions are 9 lb/day. It is reasonable to assume emissions are directly related to sulfidity and throughput.

Therefore, for the new precoat filters operating at an average of 1,200 gpm white liquor with 27 percent sulfidity, calculated TRS emissions are:

a. $\frac{27}{31} = \frac{x}{9}$ $\quad x = 7.8$ lb/day at 27% sulfidity

then:

$\frac{1,200}{900} = \frac{x}{7.8}$ $\quad x = 10.4$ lb/day at 1,200 gpm and 27% sulfidity

b. 10.4 lb/day / 24 hr/day = 0.433 lb/hr TRS as H_2S

c. 10.4 lb/day x $\frac{365 \text{ day}}{\text{yr}}$ / $\frac{2,000 \text{ lb}}{\text{ton}}$ = 1.90 TPY TRS as H_2S

The precoat filters selected have hoods with a natural draft moisture vent. The units are in an enclosed building to minimize fugitive dust emissions from dewatered lime mud conveyors. Hood vents exit the building to prevent moisture from the filter hot water sprays from condensing in the building.

2. ACID WASHING

The frequency of acid washing each precoat filter could be as great as twice per week. Because of the method of acid washing, it is expected that total volume of residual white liquor per wash will be about 25 percent of the white liquor pressure filter or 0.25 x 2 ft^3 = 0.5 ft^3.

VIII. DREGS FILTERS

FUGITIVE TRS EMISSIONS

1. NORMAL OPERATION

The information from Eurocan Pulp and Paper includes an estimate for dregs filter fugitive TRS emissions at 75 percent of the lime mud precoat filter emissions. Calculated emissions then are:

0.75 x 10.4 lb/day = 7.80 lb/day

7.80 / 24 hr/day = 0.325 lb/hr TRS as H_2S

$$7.80 \text{ lb/day} \times \frac{365 \text{ days/year}}{2{,}000 \text{ lb/ton}} = 1.424 \text{ TPY TRS as } H_2S$$

2. ACID WASHING

The dregs filter could be acid washed up to twice per month. Emissions are calculated based on 75 percent of the emissions from the white liquor pressure filters. Calculated emissions are:

$$0.75 \times 2.27 \text{ lb } H_2S/\text{wash} = \frac{1.70 \text{ lb}}{\text{wash}}$$

$$\frac{1.70 \text{ lb}}{\text{wash}} \times \text{"1" filter} \times \frac{\text{"2" wash}}{\text{filter-month}} \times \frac{12 \text{ month}}{\text{year}} / 2{,}000 \text{ lb/ton}$$

= 0.020 TPY TRS as H_2S

C. TOTAL

1.424 + 0.020 = 1.34 TPY TRS as H_2S

Revised 7/16/87

Table B-1. EMISSION STACK GEOMETRY AND FLOW CHARACTERISTICS

Emission Point	Stack[2] Height (ft)	Stack Diameter (in)	Gas Flow Rate (ACFM)	Gas Flow Rate (DSCFM)	Exit Temp. (°F)	Water Vapor (%)	Exit Velocity (ft/s)
Slakers Stack[1]	133	23.375 ID	657	461	141	Saturated	3.7
Lime Kiln Bin Baghouse	124	12 NPS	2000	2000	Ambient - 350	Ambient	61.6
Water Treat Bin Baghouse	14.0	8 NPS	1851	1851	Ambient	Ambient	18.5
White Liquor Pressure Filter Vent	79.0	10 NPS	1400	775	375	Saturated	30-66
Lime Mud Pressure Filter Vent	79.0	10 NPS	1400	850	375	Saturated	30-66
Stand-by Pressure Filter Vent	79.0	10 NPS	When in use, the same as the white liquor or lime mud pressure filter vents.				
North Lime Mud Precoat Filter	76.0	24 NPS	650	484	131	Saturated	3.4
South Lime Mud Precoat Filter	76.0	24 NPS	650	484	131	Saturated	3.4

Source: Buckeye Cellulose, 1986

1. Based on slaker test data.
2. Above grade.

The following data is needed for environmental permitting of the Causticizing Modernization Project:

Water Treat Lime Bins

	East	West
Diameter	18' ID	18' ID
Height Above Grade	49'6"	59'6"
Volume in Cubic Feet	8890 CF	6348 CF
Volume in Tons Lime	249	178

Water Treat Lime Bin Baghouse, Equipment No. 07-161

Type of Control Equipment: Baghouse - Fuller Model 36FR8
Filter Size
a. Square feet of filter cloth: 375
b. Type of Bags: Polyester
Filter % Efficiency on Lime Dust: .02 Grains/SCF
Design Air Flow Rate, ASCFM: 1851 CFM at 14" Hg
Air: Cloth Ratio, ASCFM/Square Ft.: 4.94 ASCFM/SF
Cleaning: Pulse on demand
Dimensions of Baghouse: 4' diameter x 19' including conical hopper
Stack Diameter, Inches: 8"
Stack Height Above Grade: 14'
Grade Elevation Above Sea Level, Ft.: 54'6"
Manufacturer of Baghouse: Fuller Company
Design Housing MAP, In Hg: 17
Operating Differential Pressure, In Hg: 0-14

Causticizing New Lime Bin Baghouse, Equipment No. 08-1109

Type of Control Equipment: Micro-Pulsair 100S-10TR Baghouse
Filter Size
a. Square feet of filter cloth: 1,178 (100 filter elements)
b. Type of Bags: Polyester, 16 oz/ft^2, 275^{o}F
Filter % Efficiency on Lime Dust: 99.9%, 0.02 Grains/ACFT
Design Air Flow Rate, ASCFM: 2000
Air: Cloth Ratio, ASCFM/Square Ft.: 1.7
Cleaning: Pulse on demand
Dimensions of Baghouse: 72" x 72" x 207" including pyramidal hopper
Stack Diameter, Inches: 24"
Stack Height Above Grade: 133'
Grade Elevation Above Sea Level, Ft.: 55'0"
Manufacturer of Baghouse: Micro-Pulsair Mikropul Corp.
Design Housing MAP, In H_2O: 16
Operating Differential Pressure, In H^2O: 4-6

SLAKERS WET SCRUBBER DESIGN DATA

Scrubber type: direct contact condenser

Water pressure: 20 psig

Operating number of nozzles: 2 (one per slaker vent)

Design nozzles: 6 total; 2 per slaker vent and 2 after combined flow

Operating water flow rate: 60 to 90 gpm

Water temperature: less than 90°F

Efficiency: 90% minimum, per vendor information

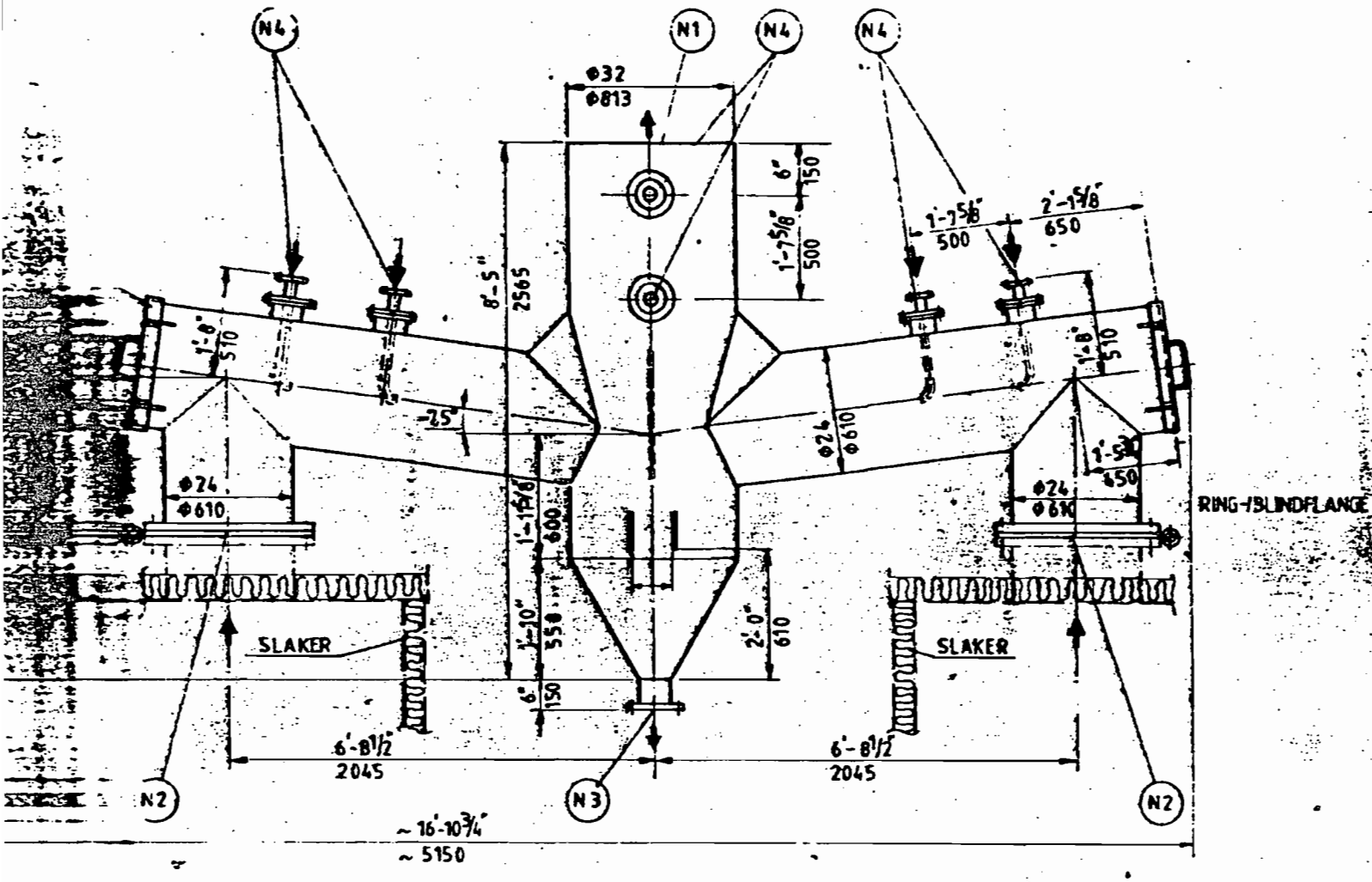
Manufacturer: ENSO 2 x 0600/800 (See B-4a and B-4b)

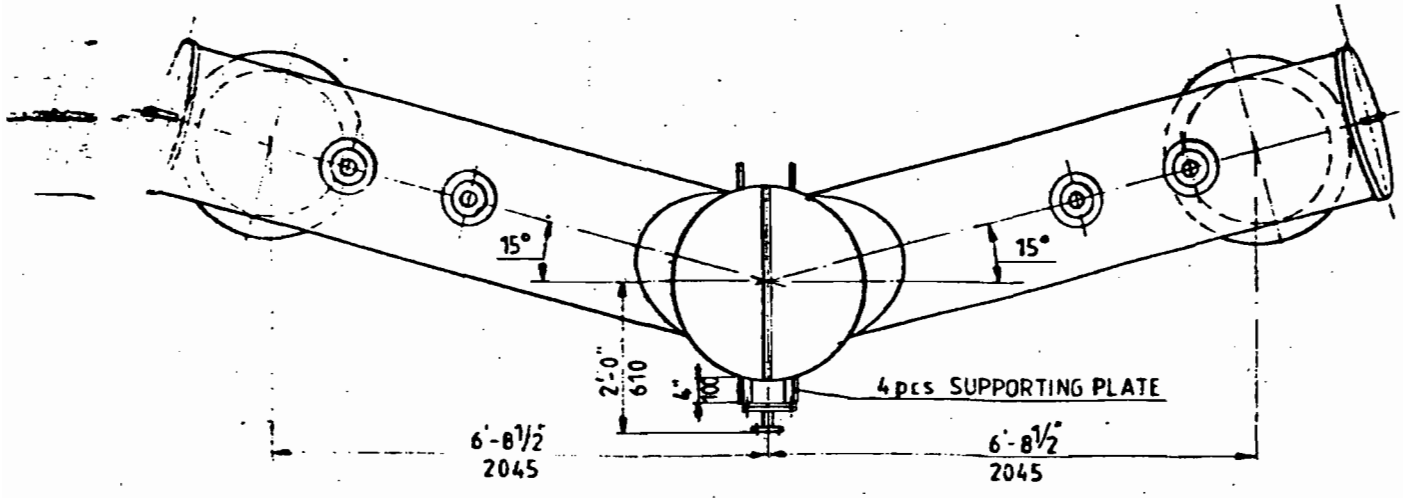
Equipment number: 08-1022

Slaker internal design will minimize dust carryover. Design features include:

* Distance between lime feed chute and vent follow good engineering practice.
* Internal dust baffle suspended from roof between lime feed chute and grits conveyor reduces fugitive emissions.
* Slaker impeller is submerged.
* Enclosure of the slaker will be maximized to minimize the vent volume required to keep the slaker under negative pressure.
* The face velocity at the plenum of the slaker vent is low to minimize entrainment of dust in the exhaust gas stream.

BEST AVAILABLE COPY



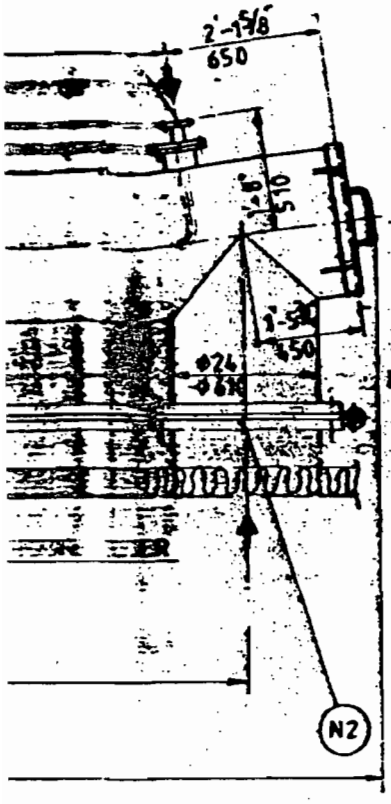


B-4a

7/14/97

NOZZLES

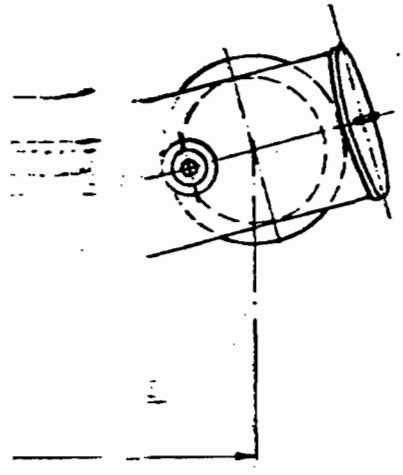
	SIZE		NUMBER	DRILLING	FACING	ORIENT	PROJ.	SERVICE
N 1	32"	DN800	1					VAPOUR
N 2	24"	DN600	2	150#				VAPOUR
N 3	6"	DN150	1	150#				WATER DRAIN
N 4	1 1/2	DN 40	6	150#				MILL WATER
N 5								
N 6								
N 7								
N 8								
N 9								
N10								



FLOW: 28 GALL/MIN — 30 PSI/WATERNOZZLE
43,8 ---/--- — 30 ---/ ——"——

WEIGHT: 2500 kg
5500 lbs.

MATERIAL: AISI 304 L



AE 923-5923
JOB FILE FL-8-157
EQUIP. NO. 08-1022
P. O. NO. FL-89106

CERTIFIED
ENSO-GUTZEIT OY
Engineering Division
Date DEC. 19 1985
Signature

P.O. FL 89106 HBP
AE 923—5923
EQ No 08—1022

Scale 1:20	BUCKEYE CELLULOSE C.O.	
ENSO EG ENSO-GUTZEIT OY ENGINEERING DIVISION SAVONLINNA FINLAND	SCRUBBER 2 x ø600/800	1985-11-18 / 6540044 / 244708 B

B-46

7/16/87