3.16.88 Perry, FL THM

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

26 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959

1230001

August 17, 1983

Mr. C. E. Wertheimer, Jr., Plant Manager
The Buckeye Cellulose Corporation
Rt. 3, Box 260
Perry, Florida 32347

Dear Mr. Wertheimer:

Taylor County - AP
The Buckeye Cellulose Corporation
No. 1 Bark Boiler

No. 1 Bark Boiler, permit No. A062-48928, is revised as follows based on the test results obtained while firing 100% wastewood and producing steam at the maximum permitted rate:

Page 1, add "Maximum heat input rate is 300 MMBTU/hr when firing 100% waste wood."

Page 3, Specific Condition No. 2, change -- "170,000 lbs. steam/hr waste wood" to "200,000 lbs. steam/hr from waste wood--."

All other conditions remain as stated.

Copied: CHF | BT
Pradeep Raval
Bruce Mitchell } 3.17.88

Sincerely,

G. Doug Dutton

GDD:

3/16/88

Pradeep - I hope this is what you needed. Let me know if I can be of further help.

Jim Farmer R

First in cellulose

The Buckeye Cellulose Corporation

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

April 20, 1983

Mr. J. K. Ketteringham
Florida Department of Environmental Regulation
3426 Bills Road
Jacksonville, FL 32207

Re: The Buckeye Cellulose Corporation
No. 1 Bark Boiler
Operating Permit AO62-48928
Issued January 5, 1982; Expires January 4, 1987

Dear Mr. Ketteringham:

Enclosed is a revised copy of the particulate emission test performed by Harmon Engineering on January 20, 1983. Dr. Bruce Ferguson has addressed the concerns of your letter of March 16, 1983. The DER test report summary and steam production rate data were inadvertantly left out of the initial report and are attached.

The test results show an average actual emission rate of 23.6 lbs/hour vs. an allowable of 47.25 lbs/hour. This is 50% of the permitted allowable and confirms compliance with particulate emission limits when operating the boiler at the maximum permitted rate on 100% waste wood product.

If there are any further questions or information needed please contact me.

Very truly yours,

THE BUCKEYE CELLULOSE CORPORATION

John Millican

J. H. Millican
Environmental Control Manager

JHM/eph

Enclosures

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER SUBDISTRICT

BEST AVAILABLE COPY

AP POINT SOURCE TEST RESULTS REPORT

Point I.D. Permit No. Date	Pollutant	Run No.	Process Operation Rate	Allowable Emissions lbs/hr.	Actual Emissions lbs/hr.	ACFM	Temp (^{o}F)	H_2O (Vol)
#1 Bark Boiler ID 8'2" x 7'10" A062-48928 1/20/83	Dust	1	lb/hr Steam 198,927	47.25	29.56	100,591	151	25.0
1/20/83		2	202,381	47.25	17.63	91,151	143	19.8
1/20/83		3	202,512	47.25	23.50	96,846	140	21.8
Average			201,273	47.25*	23.56	96,196	145	22.2
JEF/lsl 3/23/83				*Maximum Permit Allowable 47.25 lbs/hr				

JAN 8 1982 JTM

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
Telephone: 904/396-6959

BOB GRAHAM
GOVERNOR
VICTORIA TSCHINKEL
SECRETARY

G. DOUG DUTTON
SUBDISTRICT MANAGER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER SUBDISTRICT

January 5, 1982

Mr. G. B. Ellis, Plant Manager
The Buckeye Cellulose Corporation
Rt. 3, Box 260
Perry, Florida 32347

Dear Mr. Ellis:

Taylor County - AP
The Buckeye Cellulose Corp.
No. 1 Bark Boiler (BB)

Enclosed is Permit Number A062-48928 , dated January 5, 1982 , to operate the subject pollution source, issued pursuant to Section 403.061(14), Florida Statutes.

Should you object to this permit, including any and all of the conditions contained therein, you may file an appropriate petition for administrative hearing. This petition must be filed within fourteen (14) days of the receipt of this letter. Further, the petition must conform to the requirements of Section 28-5.201, Florida Administrative Code (see reverse side). The petition must be filed with the Office of General Counsel, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301.

If no petition is filed within the prescribed time, you will be deemed to have accepted this permit and waived your right to request an administrative hearing on this matter.

Acceptance of the permit constitutes notice and agreement that the department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement action for violation of the conditions and requirements thereof.

Sincerely,

Frank Watkins, Jr., P.E.
Subdistrict Engineer

FW:jck

cc: Mr. George F. Nevin, P.E.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER
SUBDISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

APPLICANT:

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

PERMIT/CERTIFICATION NO. A062-48928

COUNTY: Taylor

PROJECT: No. 1 Bark Boiler

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

For the Operation of No. 1 Bark Boiler (BB) Fired with Waste Wood (WW) Products at a Maximum Heat Input Rate of 250 MMBTU/Hr. As Necessary, No. 6 Fuel Oil with a Sulfur Content Not to Exceed 2.5% Will Be Fired Either as Supplemental Fuel or if Fired Only the Maximum Heat Input Rate is 240 MMBTU/Hr. Emissions are Controlled by a Cyclone Collector and a Wet Venturi Scrubber.

Located 5 to 6 miles SE of Perry, Taylor County, FL
UTM: E-256,740 N-3,328,700

In accordance with application dated October 20, 1981.

Issued January 5, 1982; Expires January 4, 1987

PERMIT NO.: A062-48928 No. 1 Bark Boiler
APPLICANT: The Buckeye Cellulose Corp.
SPECIFIC CONDITIONS:

1. Supporting documents are retained in file of office to which it was submitted and not attached as stated in the leading paragraph and General Condition No. 2. They are as follows:

a. operation permit application
b. October 9, 1981 test report

2. Testing of emissions must be accomplished at a production rate of at least 90% of 170,000 lbs. steam/hr. waste wood or 200,000 lbs. steam/hr. from wastewood and F.F.

3. The permitted maximum allowable emission rate for each pollutant is as follows:

Pollutant	Emission Rate (lbs/hr)	Emission Rate (TPY)
Part. (WW)	47.25	198.45
Part. (FF)	24.0	NA
VE	30% opacity, except 40% for 2 min/hr.	

4. Test the emission for the following pollutant(s) at intervals indicated from the date of October 1, 1981, notify us 14 days prior to testing, and submit a copy of the test report to this office within 15 days after completion of the testing:

Pollutant	Interval
Part.	12 mos.
VE	Exempt due to moisture

5. Submit an annual operation report for this source on the form supplied by the Department for each calendar year on or before March 1.

6. Any revision(s) to a permit (and application) must be submitted and approved prior to implementing.

7. Forms for renewal will be sent 5 months prior to January 4, 1987 and the completed forms with test results are due 90 days prior to January 4, 1987.

Expiration Date: January 4, 1987

Issued this 5th day of January, 19 82.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

G. Doug Dutton, Subdistrict Manager

First in cellulose

The Buckeye Cellulose Corporation

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

April 30, 1980

Mr. Douglas Dutton
Florida Department of Environmental Regulation
3426 Bills Road
Jacksonville, FL 32207

Dear Mr. Dutton:

Enclosed are four copies each of applications to modify Bark Boilers No. 1 and No. 2 at the Buckeye Cellulose Corporation Plant in Foley, Florida. Also enclosed is a check for $40 to cover the filing fees. Details of the modifications are included in the applications and the attachments.

Currently, the Foley plant operates two Bark Boilers which are fired with bark and waste wood, averaging 50% moisture content. It is proposed to install a rotary dryer to utilize waste heat from No. 2 Bark Boiler flue gases to reduce the moisture in the waste fuel to the 30% range. This change will effectively increase the steaming rate of No. 1 Bark Boiler from 150,000 pounds per hour to 170,000 pounds per hour and the steaming rate of No. 2 Bark Boiler from 280,000 pounds per hour to 375,000 pounds per hour when firing bark. This increased steaming rate will result from the increased boiler furnace effectiveness when firing lower moisture fuel.

The total permitted allowable particulate emissions for these two boilers is 153.98 pounds per hour. It is proposed to control the total particulate emissions after the change to the same limit. No change in the total permitted allowable particulate emissions is requested. To accomplish this level of control, venturi type wet scrubbers will be installed to scrub the exhaust gases from No. 2 Bark Boiler and the new dryer, and No. 1 Bark Boiler. The calculations for the permitted allowable are as shown on Attachment 5 for each boiler permit application.

Mr. Frank Collins and Mr. Archie Lee of Region IV EPA and Mr. Johnny Cole of your staff have reviewed the project and agree that no PSD review is required. The benefits accruing from this project at Foley include an approximate 40% reduction in fossil fuel consumption from current levels.

The applications should be complete with all of the information requested by Mr. Cole. However, if there are any questions or if additional information is needed, a direct phone contact to me at (904) 584-0347 by Mr. Cole would be appreciated in order to accomplish expeditious processing of the permit application.

Very truly yours,

THE BUCKEYE CELLULOSE CORPORATION

John M. Millican

J. H. Millican
Environmental Control Manager

JHM/eph

Attachments

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Bark Boiler [ ] New[1] [x] Existing[1]

APPLICATION TYPE: [ ] 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; Peeking Unit No. 2, Gas Fired) #1 Bark Boiler

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

UTM: East 256,740 North 3,328,700

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

APPLICANT NAME AND TITLE: G. B. Ellis, Plant Manager

APPLICANT ADDRESS: Perry, FL

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

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

I certify that the statements made in this application for a 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: G. B. Ellis 4/30/80

G. B. Ellis, Plant Manager
Name and Title (Please Type)

Date: _____ 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 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)

(Affix Seal)

E. M. Watkins
Company Name (Please Type)

P. O. Box 2194; Tallahassee, FL 32304
Mailing Address (Please Type)

Florida Registration No. 8341 Date: 3/14/80 Telephone No. (904) 576-7181

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

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.

Install a full scale wet scrubber on No. 1 Bark Boiler to replace existing B&C collectors as described on page 4 of permit No. AO62-2663 dated 3/1/77 - See attached description.

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

Start of Construction 8/1/80 Completion of Construction 12/1/81

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.)

Breakdown of costs not available.

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

AO 62-2093 5/18/73 - 7/1/75, AC 62-2245 7/29/74 - 7/1/75 (Mechanical collector), Consent order 7/10/75 - 11/15/76, AO 62-2663 3/1/77 - 2/28/82.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes __x__ No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 50 ; if power plant, hrs/yr ____ ; if seasonal, describe: ____

G. 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? — NA
   b. If yes, has "Lowest Achievable Emission Rate" been applied? — NA
   c. If yes, list non-attainment pollutants. NA
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) requirements 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

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Bark			20 tons/hr-30%H_2O	Vent 10 - 6
Bark & Fossil Fuel			*	Vent 10 - 6

* See * page 4.

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

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

2. Product Weight (lbs/hr): Bark 170M lbs/hr., Bark & F.F. 200M lbs/hr. expressed as steam.

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C. **	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate Bark	47.25	198.45	0.3 lb/10^6 BTU	47.25	NA		Vent 10-6
" F.F.	24.0		0.1 lb/10^6 BTU	24.0	NA		Vent 10-6
SO_2	666		2.5% Sulfur Oil	NA	NA		Vent 10-6
NO_x	NA	NA	NA	NA	NA		Vent 10-6

** See * Attachment 5.

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]
A. Research Cottrell/	Flyash	Overall	NA	Design
Cyclo-trell Series 8X		System		
B. Ducon Wet Venturi		Minimum of	NA	
Scrubber 92R/180		93%		
Type VVO				
Equip. No. 11.1929				

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 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)

[5] If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Bark	90-95% Max.	20 T/hr 30% H_2O	250
Bark & Fossil Fuel	*	*	250

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis: No. 6 Fuel Oil

Percent Sulfur: 2.5% Percent Ash: **

Density: 8.1 lbs/gal Typical Percent Nitrogen: **

Heat Capacity: 18,000 BTU/lb 146,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): Bark 8,000 - 9,000 BTU/lb Bone dry basis

** #6 Fuel Oil meets ASTM specifications

F. If applicable, indicate the percent of fuel used for space heating. Annual Average 0 Maximum 0

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

Solid waste collected is normally sold as a by-product or reinjected and burned.

Liquid waste goes to primary and secondary treatment.

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

Stack Height: 225 ft. Stack Diameter: 13 ft.

Gas Flow Rate: 84,000 ACFM Gas Exit Temperature: 140 °F.

Water Vapor Content: 20 % Velocity: NA FPS

*Burning bark saves fossil fuel and so it is planned to burn maximum bark consistent with plant requirement.

SECTION IV: INCINERATOR INFORMATION

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.)
Lbs/hr Incinerated							

Description of Waste

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

Approximate Number of Hours of Operation per day days/week

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.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.
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.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
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, etc.).
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).
6. An 8½" 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.
7. An 8½" 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).
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

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*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: 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*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

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:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

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*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

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*:
3. Capital Cost:
4. Life:
5. Operating Cost:
6. Energy:
7. Maintenance Cost:
8. Manufacturer:
9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

*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.

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 on 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.

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

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 tec[illegible] publications, journals, and other competent relev[illegible] formation describing the theory and applicatio[illegible] sed best av[illegible]able control technology.

No. 1 BARK BOILER

DESIGN BASIS AND EMISSION IMPACT

DESIGN BASIS

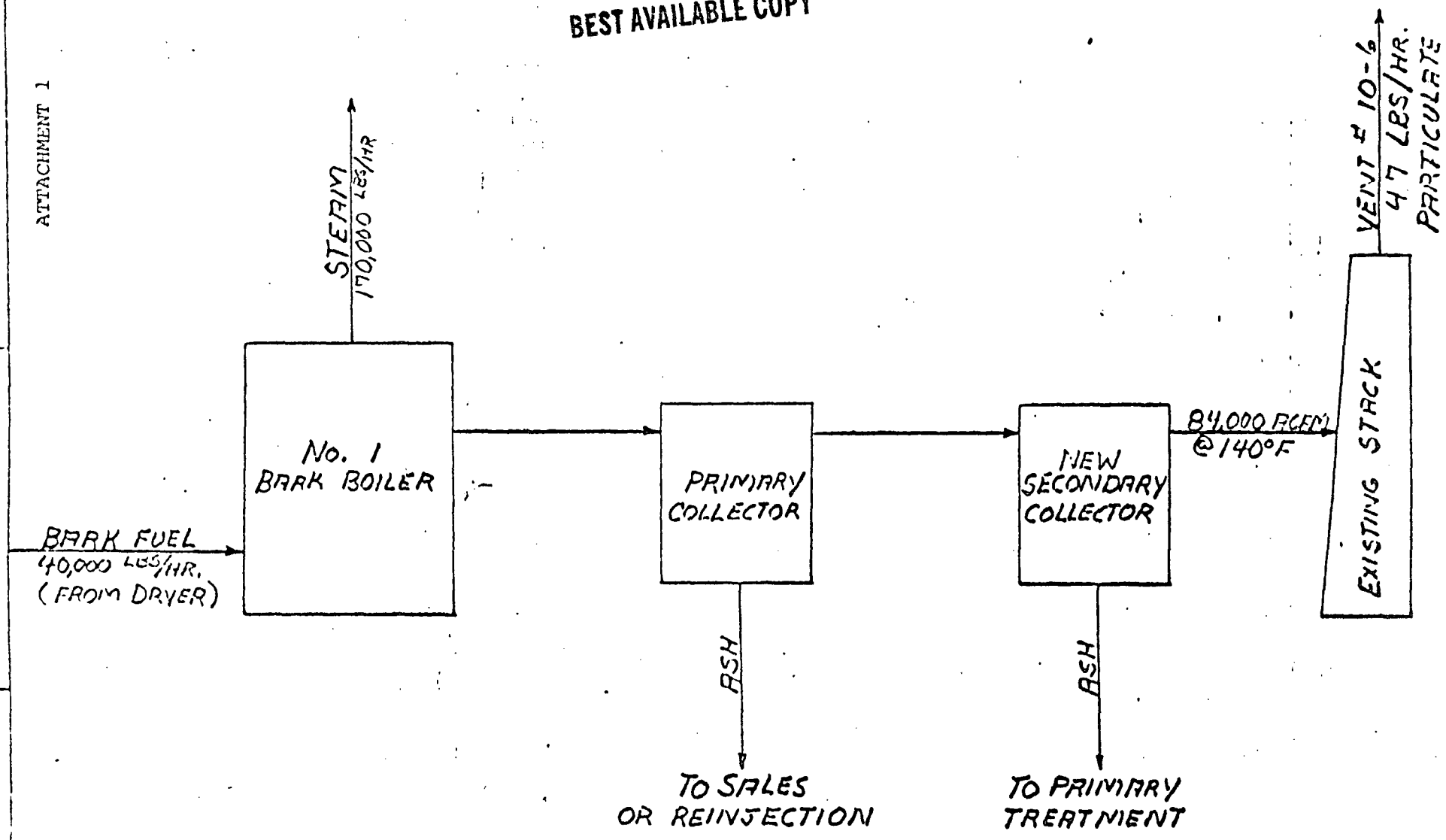
No. 1 Bark Boiler steaming capacity will be increased by supplying bark at approximately 30% moisture from a new rotary dryer. Approximately 60% of the flue gas from No. 2 Bark Boiler will be passed through the new dryer to recover heat currently discharged to the atmosphere. The additional bark burning capacity realized by burning 30% rather than 50% moisture bark will reduce the amount of fossil fuel (No. 6 fuel oil) currently used to provide energy for plant needs. The system flow sheet is shown as Attachment 1. Attachment 2 shows the location of the plant site. Attachments 3 and 4 show the location of the boiler on the site.

EMISSION CONTROL

The quantity of particulate emissions will be controlled by a full scale, Ducon, variable throat, venturi type wet scrubber to replace the existing "B" and "C" collectors. Controlled emissions will be reduced by burning dryer bark and providing improved control with the full scale wet scrubber. The scrubber will be installed after the existing primary collector with final discharge to atmosphere through the existing stack as shown on Attachment 1.

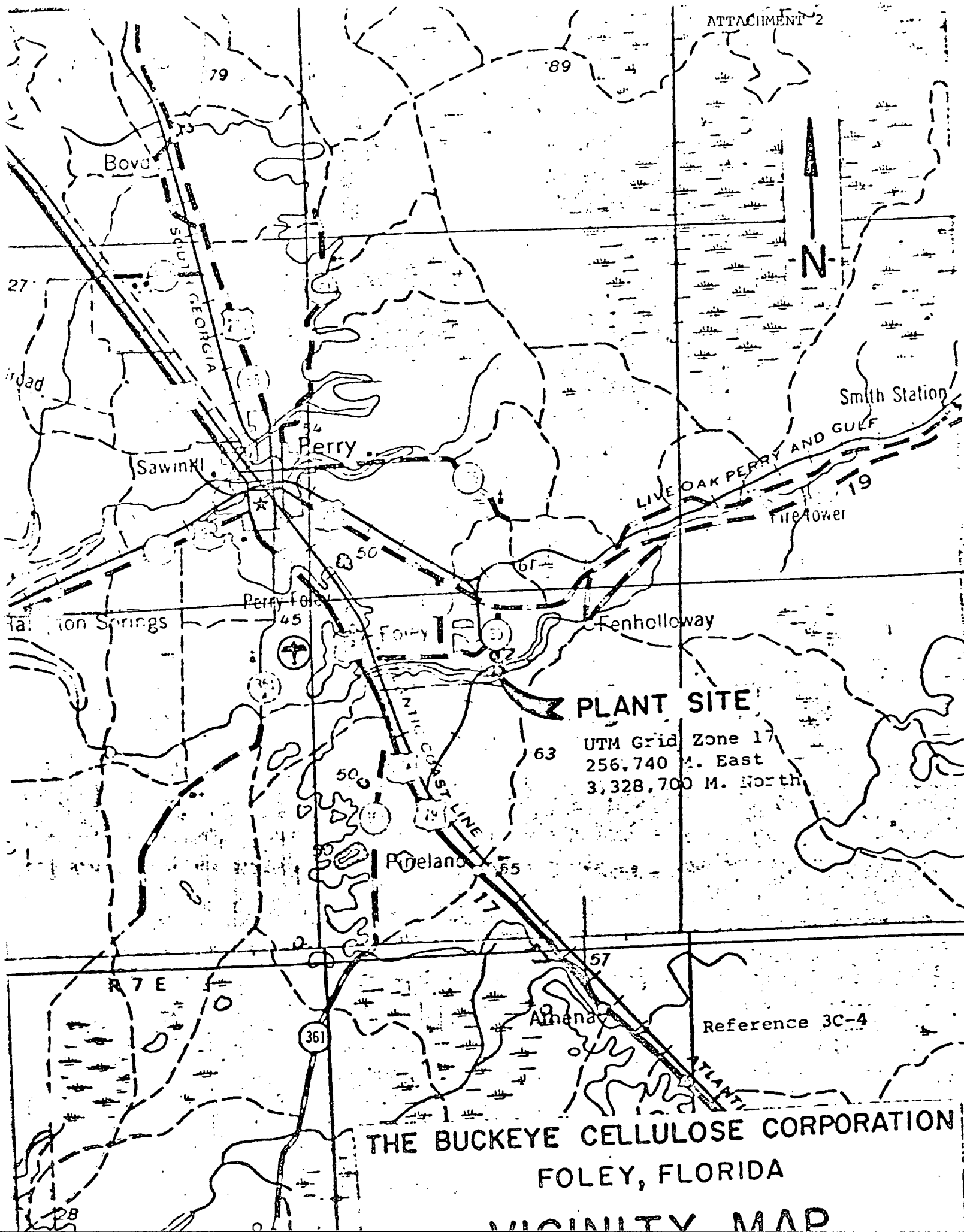
SO_2 emissions are limited by the requirement to burn fossil fuel of 2.5% residual sulfur.

ATTACHMENT 1



BUCKEYE CELLULOSE CO
FOLEY, FLA.

No. 1 BARK BOILE
2/8/8

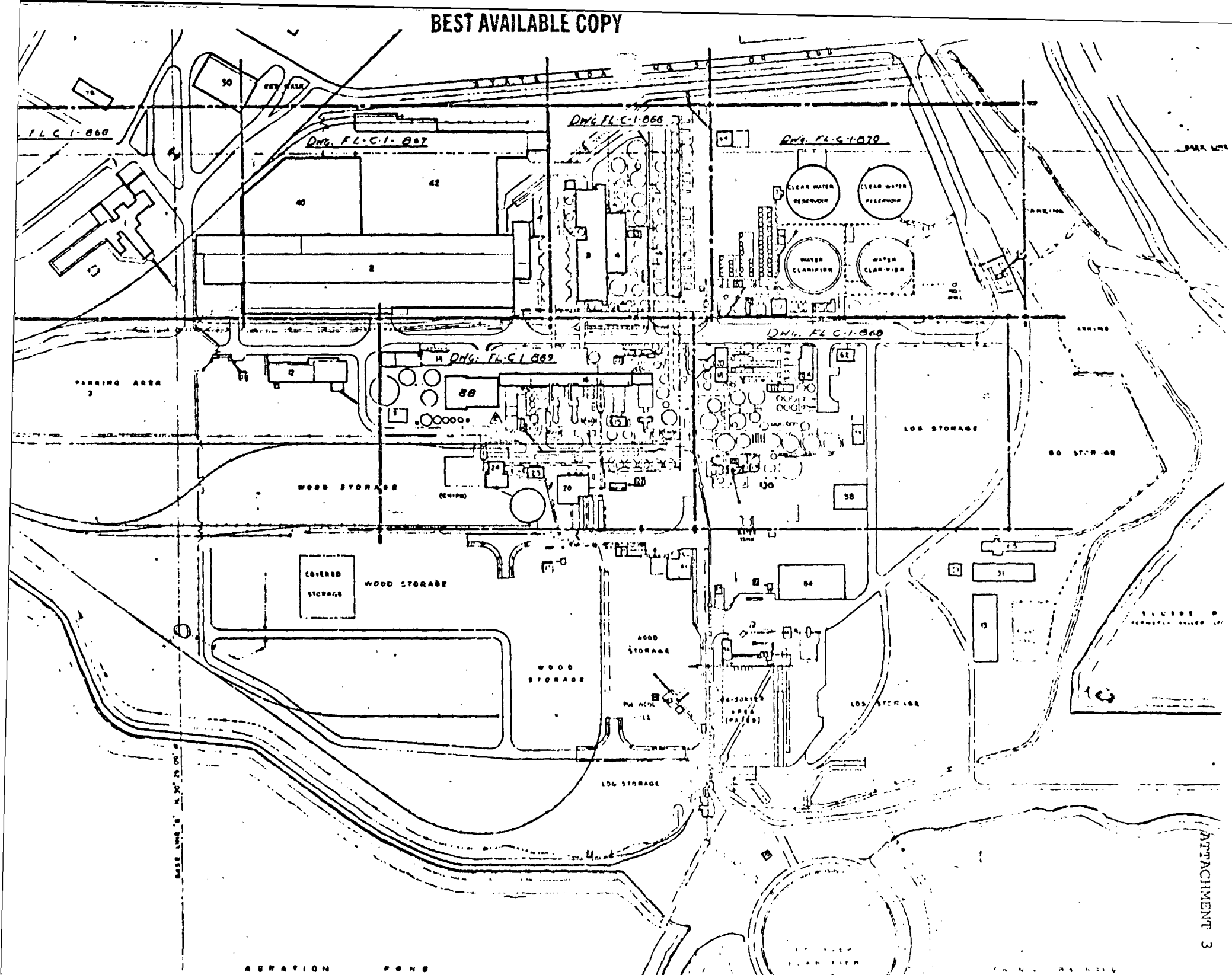


THE BUCKEYE CELLULOSE CORPORATION

FOLEY, FLORIDA

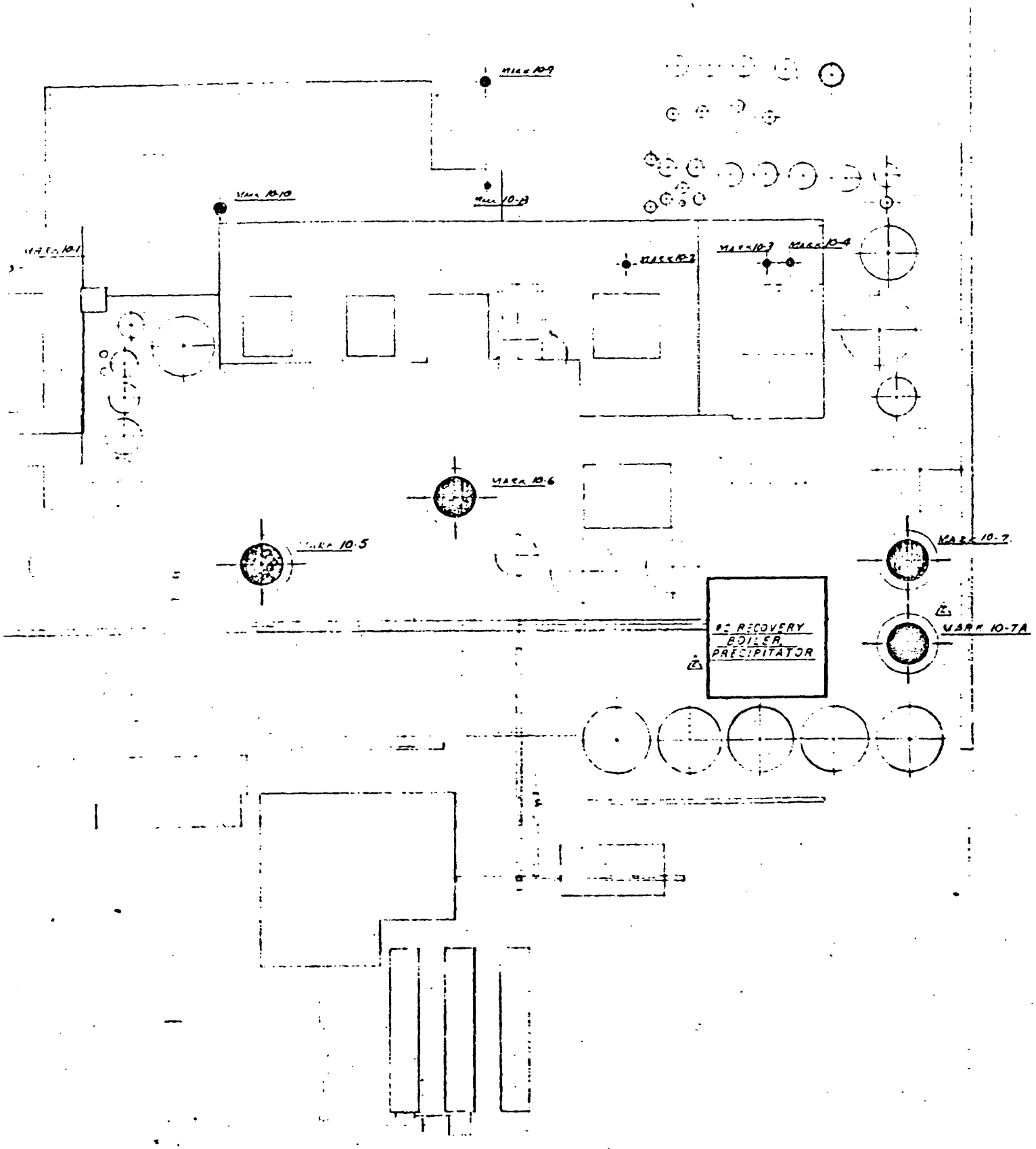
VICINITY MAP

BEST AVAILABLE COPY



ATTACHMENT 3

ATTACHMENT 4



E. M. WATKINS & COMPANY

THE BUCKEYE CELLULOSE CORP.

FL-C-1-869

No. 1 BARK BOILER

Page 3, Item C

The actual pounds of particulate emissions for No. 1 and No. 2 Bark Boilers when burning bark will be controlled so that the following conditions are maintained:

1. Current permitted particulate emission limits will not be exceeded. These are:
   75.3 lbs./hr. on No. 1
   78.68 lbs./hr. on No. 2
   153.98 Total lbs./hr.

2. Existing Ch. 17-2 limits will not be exceeded. These are .3 lbs./MMBTU for No. 1 Bark Boiler and .2 lbs./MMBTU for No. 2 Bark Boiler.

Application of these conditions gives a calculated allowable emission for each boiler of .189 lbs./MMBTU. This is calculated based on the ratio of the increased steaming rates to the existing total allowable pounds/hr. of permitted particulate emissions:

250 MMBTU/hr. for No. 1 Bark Boiler
563.5 MMBTU/hr. for No. 2 Bark Boiler
813.5 MMBTU/hr. Total

$$\frac{153.98 \text{ lbs./hr. particulate}}{813.5 \text{ MMBTU/hr.}} = .189 \text{ lbs./MMBTU}$$

Then the maximum pounds/hour for No. 1 Bark Boiler becomes 250 MMBTU/hr. X .189 pounds/MMBTU or 47.25 pounds/hour. Actual tons/yr. = 7 days x 24 hrs. x 50 weeks x 47.25 pounds/hr. divided by 2000 pounds/ton = 198.45 tons/yr. Design details may cause the 47.25 pounds/hr. allowable to vary but in all cases both conditions 1 and 2 above will control.

Actual particulate when firing fossil fuel will be .1 pound per MMBTU.

Potential particulate emissions will be reduced by the installation of the bark dryer. See Attachment 6. It is estimated that the installation of the bark dryer will reduce fossil fuel usage at the Foley Plant by approximately 40%.

Calculated SO_2 emissions are as follows:

$$SO_2 = \text{Gal./hr. x pounds/gal. x \% sulfur x } \frac{SO_2}{S} - = \text{ pounds/hr. } SO_2$$

$$\text{Max. Oil consumption} = \frac{*240 \text{ MMBTU/hr.}}{146{,}000 \text{ BTU/Gal.}} = 1644 \text{ gal./hr.}$$

* No. 1 Bark Boiler fossil fuel is physically limited by burner tip capacity.

Calculations are for burning fuel oil only and at maximum rates. Actual SO_2 emissions would be minimal because the objective is to burn maximum bark and only that amount of fuel oil necessary to sustain proper combustion conditions consistent with plant requirements.

C-E Power Systems
Combustion Engineering, Inc.
1000 Prospect Hill Road
Windsor, Connecticut 06095

Tel. 203/688-1911
Telex 99297

POWER SYSTEMS

Gen. Files

July 2, 1976

Stearns-Roger
700 South Ash
P.O. Box 5888
Denver, Colorado 80217

Attention: Mr. R. W. Robinson

Gentlemen:

In reply to your letter of June 8, 1976 to our Mr. E. J. Huyghebaert, we have the following comment on your question on drying bark to 30% moisture content.

Combustion Engineering has predicted a dust loading of $3.9\#/10^6$ Btu without reinjection while burning 50% moisture bark on a boiler being built for International Paper, C-E Contract 22174, at Mobile, Alabama. Based on our experience and that of others, we predict that when the bark is predried to 30% moisture, the emissions at the boiler would be reduced to about $2.5\#/10^6$ Btu, for the same amount of heat input.

Very truly yours,

COMBUSTION ENGINEERING, INC.

E. Burtt, Project Engineer for
D. J. Clukey, Project Manager

EB/pc