

P 408 530 324

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to D. J. Nootens	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date 6/16/83	

PS Form 3800, Feb. 1982

PS Form 3811, Jan. 1979

Ⓢ SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
 Show to whom and date delivered.....¢
 Show to whom, date and address of delivery.....¢
 RESTRICTED DELIVERY
 Show to whom and date delivered.....¢
 RESTRICTED DELIVERY.
 Show to whom, date, and address of delivery. \$ _____
 (CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 Mr. D. J. Nootens
 6825 Evergreen Ave.
 Jacksonville, FL 32206

3. ARTICLE DESCRIPTION:
 REGISTERED NO. | CERTIFIED NO. | INSURED NO.
 | P408530324 |
 (Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE: Addressee Authorized agent
D. Brian Smith

4. DATE OF DELIVERY: 6-17-83
 POSTMARK: JUN 17 1983 JACKSONVILLE FL

5. ADDRESS (Complete only if necessary)

6. UNABLE TO DELIVER BECAUSE: _____ CLERK'S INITIALS: _____

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

June 14, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. D. J. Nootens
Works Manager
United States Gypsum Company
6825 Evergreen Avenue
Jacksonville, Florida 32206

Dear Mr. Nootens:

Enclosed is Permit Number AC 16-56235, dated June 13, 1983, to United States Gypsum Company issued pursuant to Section 403, Florida Statutes.

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 actions for violation of the conditions and requirements thereof.

Sincerely,

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

CHF/bjm

Enclosure

cc: Ragan M. Womack, P.E., United States Gypsum Company
John Ketteringham, DER Northeast District
Jerry Woosley, Duval County Division of Bio-Environmental
Services

Final Determination

United States Gypsum Company

Duval County

Cogeneration Turbines

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

May 26, 1983

Final Determination

The request of the United States Gypsum Company to construct two gas-fired turbines for the cogeneration of electricity and steam at their paper board facility in Jacksonville has been reviewed by the Bureau of Air Quality Management. Notice of the department's Intent to Issue was published in the Florida Times-Union on April 25, 1983.

Copies of the preliminary determination and technical review were available for public inspection at the City of Jacksonville's Bio-Environmental Services Division Office, the DER Northeast District Office, and the Bureau of Air Quality Management's Office.

No comments resulting from this public notice period have been received. Therefore, it is requested that the construction permit be issued as presented in the preliminary determination.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Fl 32206-0197

Permit Number: AC 16-56235
Expiration Date: February 28, 1985
County: Duval
Latitude/Longitude: 30° 22' 52"N/
81° 38' 01"W
Project: Two 37MMBtu natural gas
fired cogeneration turbines with
LPG as the alternate fuel.

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

For the construction of a cogeneration facility consisting of two
37MMBtu/hr natural gas fired turbines with LPG as the alternate
fuel for the production of electricity and steam to be located at
the paper mill building, 6825 Evergreen Avenue, Jacksonville,
Florida. The Universal Transverse Mucator (UTM) cordinates of the
proposed source are Zone 17, 438.9 km East, and 3361.2 km North.

Construction shall be in accordance with the attached permit
application and plans, documents, and drawings except as otherwise
noted on pages 5-6 "Specific Conditions".

Attachments are as follows:

1. Application to construct Air Pollution Sources, DER Form
17-1.122(16).
2. Response to incompleteness letter, received February 21, 1983
with revised application to construct air pollution sources,
DER Form 17-1.122(16).

PERMITTEE:

United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I. D. Number:

Permit Number: AC 16-56235
Expiration Date: February 28, 1985

GENERAL CONDITIONS:

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

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:

United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I. D. Number:

Permit Number: AC 16-56235

Expiration Date: February 28, 1985

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

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

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida
32206-0197

I. D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

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.

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I. D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

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. Maximum allowable emissions from each turbine shall be:

Pollutant	Natural gas fired (lb/hr)	LPG fired (lb/hr)	Total Annual Emissions
PM	0.60	0.70	2.7
SO ₂ 0.8% S in fuel by weight or 150 ppm	0.03	0.55	0.2
NOx 150 ppm	12.0	12.0	52.6
VOC	0.11	0.12	0.5
CO	1.20	1.20	5.3

PERMITTEE:

United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I.D. Number:

Permit Number: AC 16-56235
Expiration Date: February 28, 1985

SPECIFIC CONDITIONS:

2. Maximum hours of operation for each turbine when burning natural gas shall be 8332.8 hours per year and when burning LPG 427.2 hours per year.

3. Maximum heat input of each turbine shall be 37 MMBtu/hr.

4. Operating permit AO 16-31708 shall be amended when the operating permit is submitted for this project to reflect the change in status of boilers 2, 3, and 4 to standby and boiler no. 1 to operate a maximum of 8332.8 hours per year firing natural gas and 427.2 hours per year when firing no. 6 fuel oil with 1.5% sulfur content and to reflect the maximum emissions contained in section III of the preliminary determination.

5. For water injection to control NOx emissions a continuous monitoring system to monitor and record the fuel consumption and ratio of water to fuel being fired in the turbine shall be installed and operated as contained in 40 CFR 60.334(a). The applicant shall monitor the sulfur and nitrogen content of the fuel being fired in the turbine with the frequency as contained in 40 CFR 60.334(b).

6. Compliance with the emission limitations shall be determined by nitrogen oxide testing using DER Method 20 as specified in Florida Administrative Code Rule 17-2.700.

7. Compliance with the process limitations shall be determined by record keeping of the daily hours of operation of each turbine, and the daily amount of fuel combusted by fuel type in each turbine. An annual operating report of this information for each calendar year shall be submitted to the Jacksonville Bio-Environmental Services Division Office by March 1 of the next year.

PERMITTEE
United States Gypsum Co.
P. O. Box 3197
Jacksonville, FL 32206-0197

I. D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

SPECIFIC CONDITIONS:

8. Prior to ninety days before the expiration of this permit, a complete application for an operating permit shall be submitted to the Jacksonville Bio-Environmental Services Division Office. Full operation of the sources may then be conducted in compliance with the terms of this permit until expiration or receipt of an operating permit.

Issued this 13 day of June, 1983

**STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION**



VICTORIA J. TSCHINKEL, Secretary

State of Florida

DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee	
To: _____	Loctn.: _____
To: _____	Loctn.: _____
To: _____	Loctn.: _____
From: _____	Date: _____

TO: Victoria J. Tschinkel
FROM: Clair Fancy *Clair James*
DATE: June 8, 1983
SUBJ: Approval of Air Construction Permit

RECEIVED

JUN 13 1983

Office of the Secretary

Attached please find one Air Construction Permit for which the applicant is United States Gypsum Company. The construction proposed is two stationary gas turbines at the applicant's existing facility in Jacksonville, Florida.

Day 90, after which the permit would be issued by default, is June 15, 1983.

The Bureau recommends your approval and signature.

CF/pa

Attachment

Check Sheet

Company Name: United Gypsum States Gypsum Company
Permit Number: NC 16-0562135
PSD Number: _____
Permit Engineer: _____

Application:

- | | |
|--|--------------------------|
| <input checked="" type="checkbox"/> Initial Application | Cross References: |
| <input checked="" type="checkbox"/> Incompleteness Letters | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Responses | <input type="checkbox"/> |
| <input type="checkbox"/> Waiver of Department Action | <input type="checkbox"/> |
| <input type="checkbox"/> Department Response | |
| <input type="checkbox"/> Other | |

Intent:

- Intent to Issue
 - Notice of Intent to Issue
 - Technical Evaluation
 - BACT or LAER Determination
 - Unsigned Permit
- Correspondence with:
- EPA
 - Park Services
 - Other
- Proof of Publication
 - Petitions - (Related to extensions, hearings, etc.)
 - Waiver of Department Action
 - Other

Final

Determination:

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

Post Permit Correspondence:

- Extensions/Amendments/Modifications
- Other

P16 7682465

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO		D. J. Nootens
STREET AND NO.		P.O. Box 3197
P.O., STATE AND ZIP CODE		Jacksonville, FL 32206
POSTAGE		\$ 0197
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	c
	SPECIAL DELIVERY	c
	RESTRICTED DELIVERY	c
	OPTIONAL SERVICES	
	RETURN RECEIPT SERVICE	
	SHOW TO WHOM AND DATE DELIVERED	c
	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	c
	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	c
TOTAL POSTAGE AND FEES		\$
POSTMARK OR DATE		

PS Form 3800, Apr. 1976

PS Form 3811, Jan. 1979

① SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
 Show to whom and date delivered.....
 Show to whom, date and address of delivery.....
 RESTRICTED DELIVERY
 Show to whom and date delivered.....
 RESTRICTED DELIVERY.
 Show to whom, date, and address of delivery \$ _____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 D. J. Nootens
 P.O. Box 3197
 Jacksonville, FL 32206-0197

3. ARTICLE DESCRIPTION:
 REGISTERED NO. CERTIFIED NO. INSURED NO.
 _____ 7682465 _____

(Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE Addressee Authorized agent
Teddy Simmon U. Shyr

4. DATE OF DELIVERY POSTMARK
 12-17-84

5. ADDRESS (Complete only if requested)

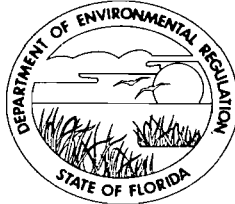
6. UNABLE TO DELIVER BECAUSE: _____ CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 7, 1984

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. D. J. Nootens
United States Gypsum Company
Post Office Box 3197
Jacksonville, Florida 32206-0197

Dear Mr. Nootens:

Re: Modification of Conditions - Permit No. AC 16-56235

The department is in receipt of your November 19, 1984, letter that requested the referenced permit to construct a co-generation facility be extended for two years. This request is acceptable and the expiration date is changed as noted below:

Expiration Date


From: February 28, 1985
To: February 28, 1987

Attachments to be Incorporated

Mr. D. J. Nooten's letter dated November 19, 1984.

A copy of this letter must be attached to the referenced construction permit and shall become a part of that permit.

Sincerely,


Victoria J. Tschinkel
Secretary

VJT/ks

cc: Johnny Cole
Jerry Woosley

attachment: November 19, 1984 letter

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional []	Reply Required []	Info. Only []
Date Due: _____	Date Due: _____	

TO: Victoria J. Tschinkel
 FROM: Clair Fancy *Clair Fancy*
 DATE: December 7, 1984
 SUBJ: Modification of Permit No. AC 16-56235

RECEIVED
 DEC 7 1984
 Office of the Secretary

Attached is a letter drafted for your signature that will extend the expiration date of construction permit No. AC 16-56235 for two years. The permit was issued to the United States Gypsum Company for the construction of a natural gas fired cogeneration facility.

The Bureau of Air Quality Management recommends their request be approved.

CHF/WH/s

attachment: letter

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

DER
NOV 27 1984
BAQM



November 23, 1984

Mr. Clair Fancy, P.E.
Dept. of Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32301

Re: Combustion Turbines
Permit AC16-56235

Dear Mr. Fancy:

Bio-Environmental Services Division supports United States Gypsum Company's request for an extension of the captioned permit.

Your prompt attention is appreciated.

Very truly yours,

A handwritten signature in cursive script, reading "Jerry E. Woosley".

Jerry E. Woosley
Assistant Engineer

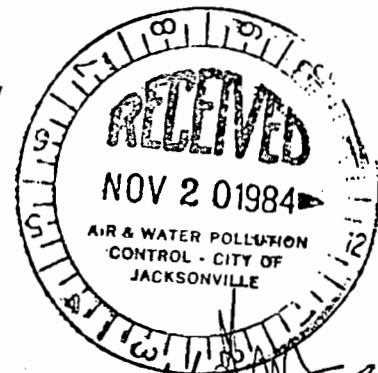
JEW/vj
Enclosure

cc: Mr. Doug Dutton - DER
cc: BESD/File 2370-X



UNITED STATES GYPSUM COMPANY //

Post Office Box 3197/Jacksonville, Florida 32206-0197 //



November 19, 1984

Mr. C. H. Fancy, P.E.
Deputy Bureau Chief
Bureau of Air Quality Management
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
Tallahassee, Florida 32301

Dear Mr. Fancy:

As of this date there has been no action, other than engineering, on construction under permit number AC16-56235 granted by your department on June 13, 1983. Delay in implementation of this co-generation project has been due to changing economic considerations, and the reordering of capital priorities. We therefore respectfully request an extension of the expiration date of the permit for a period of two years.

Very truly yours,

D. J. Nootens
Works Manager

DJN:jw

Copies to Mr. Jerry Woosley
Bio-Environmental Services Division
City of Jacksonville

Mr. F. P. May, Cgo. #176-2

UNITED STATES GYPSUM COMPANY //

Post Office Box 3197/Jacksonville, Florida 32206-0197 //

DER
NOV 19 1984
BAQM

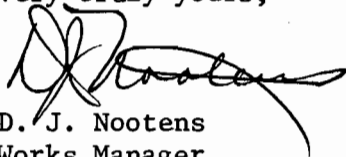
November 19, 1984

Mr. C. H. Fancy, P.E.
Deputy Bureau Chief
Bureau of Air Quality Management
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
Tallahassee, Florida 32301

Dear Mr. Fancy:

As of this date there has been no action, other than engineering, on construction under permit number AC16-56235 granted by your department on June 13, 1983. Delay in implementation of this co-generation project has been due to changing economic considerations, and the reordering of capital priorities. We therefore respectfully request an extension of the expiration date of the permit for a period of two years.

Very truly yours,



D. J. Nootens
Works Manager

DJN:jw

Copies to Mr. Jerry Woosley
Bio-Environmental Services Division
City of Jacksonville

Mr. F. P. May, Cgo. #176-2



FLORIDA PUBLISHING COMPANY
Publishers
JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared _____

George A. Dan _____ who on oath says that he is

Retail Advertising Manager _____ of The Florida Times-Union, and

Jacksonville Journal, daily newspapers published at Jacksonville in Duval County,

Florida; that the attached copy of advertisement, being a _____

Legal Notice

in the matter of Notice of proposed agency action _____

in the _____ Court,

was published in The Florida Times Union _____

in the issues of April 25, 1983 _____

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

Sworn to and subscribed before me
this _____ day of

Notary Public
State of Florida at Large.
Signature: Katherine S. ...

Signature: George A. Dan

My Commission Expires _____
Notary Public, State of Florida at Large
My commission expires Aug. 19, 1983

Notice of Proposed Agency Action
The Department of Environmental Regulation gives notice of its intent to issue a permit to the United States Gypsum Company to construct a gas turbine for cogeneration of electrical power at its paper mill facility in Duval County. A determination of Best Available Control Technology (BACT) was not required. A person who is substantially affected by the department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes. The application, technical evaluation and department's intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations: DER Bureau of Air Quality Management, 2600 Blair Stone Road, Tallahassee, Florida 32301-8241; DER Northwest District, 3426 Bills Road, Jacksonville, Florida 32207; City of Jacksonville Bio-Environmental Services Division, 515 West 6th Street, Jacksonville, Florida 32206-4397. Comments on this action shall be submitted in writing to Bill Thomas of the DER Tallahassee office within thirty (30) days of this notice.

DER
MAY 03 1983
BAQM

P 408 530 343

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to ^{US} D. J. Nootens, Gypsum	
Street and No. 6825 Evergreen Ave	
P.O., State and ZIP Code Jacksonville, FL 32206	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	

PS Form 3800, Feb. 1982

PS Form 3811, Jan. 1979

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 (CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 D. J. Nootens, Works Manager
 U.S. Gypsum Co.
 6825 Evergreen Ave.
 Jacksonville, FL 32206

3. ARTICLE DESCRIPTION:
 REGISTERED NO. CERTIFIED NO. INSURED NO.
 P408530343
 (Always obtain signature of addressee or agent)

I have received the article described above.
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 O Brian Smith

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5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆ GPO : 1979-300-458

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

April 13, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. D. J. Nootens
Works Manager
United States Gypsum Company
6825 Evergreen Avenue
Jacksonville, Florida 32206

Dear Mr. Nootens:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit to construct two stationary gas turbines at your existing facility in Jacksonville, Duval County, Florida.

Before final action can be taken on your proposed permit, you are required by Florida Administrative Code Rule 17-1.62(3) to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Duval County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice will be grounds for denial of the permit.

The Preliminary Determination and proposed permit constitute a proposed action of the department and is subject to administrative hearing under the provisions of Chapter 120, Florida Statutes, if requested within fourteen days from receipt of this letter. Any petition for hearing must comply with the requirements of Florida Administrative Code Rule 28-5.201 and be filed with the Office of General Counsel, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to file a request for hearing within fourteen days shall constitute a waiver of your right to a hearing. Filing is deemed complete upon receipt by the Office of General Counsel.

Mr. D. J. Nootens
April 13, 1983
Page Two

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

Sincerely,

John P. Svec, P.E.

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

CHF/pa

Attachment

cc: Mr. Ragan M. Womack, United States Gypsum Company
Mr. John Ketteringham, DER Northeast District
Mr. Jerry Woosley, Jacksonville Bio-Environmental
Services Division

Preliminary Determination
and
Technical Review

United States Gypsum Company
Duval County

Permit Number
AC 16-56235

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

April 11, 1983

Notice of Proposed Agency Action

The Department of Environmental Regulation gives notice of its intent to issue a permit to the United States Gypsum Company to construct a gas turbine for cogeneration of electrical power at its paper mill facility in Duval County. A determination of Best Available Control Technology (BACT) was not required.

A person who is substantially affected by the department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The application, technical evaluation and department's intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

DER Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

DER Northwest District
3426 Bills Road
Jacksonville, Florida 32207

City of Jacksonville Bio-Environmental Services Division
515 West 6th Street
Jacksonville, Florida 32206-4397

Comments on this action shall be submitted in writing to Bill Thomas of the DER Tallahassee office within thirty (30) days of this notice.

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.

I. Project Description

A. Applicant:

United States Gypsum Company
6825 Evergreen Avenue
Post Office Box 3197
Jacksonville, FL 32206-0197

B. Project and Location

The applicant's proposed project consists of constructing two 37 million Btu per hour (MMBtu/hr) turbines which will produce electrical power and steam for plant use. The facility is located in Jacksonville in Duval County. The universal transverse mercator (UTM) coordinates of the source are zone 17, 438.9 km East and 3361.2 km North.

C. Project Description and Controls

The papermill facility will be modified by the addition of two 37 MMBtu/hr natural gas fired turbines. Liquid petroleum (LP) gas is requested as the alternate fuel to be used during natural gas curtailments. The gas turbines will operate generators which will produce 6,000 KW of electricity for facility consumption. The exhaust from the turbines will flow to a heat recovery boiler which will produce steam for plant consumption. The waste heat in the boiler will then flow to the paper dryer for secondary drying before being vented to the atmosphere. It is also requested that boiler no. 1 remain on line to supplement steam production as needed. Existing boilers nos. 2, 3, and 4 are to be placed on standby status.

Air pollution controls are based upon turbine design and operating practices. No conventional add-on air pollution control equipment is proposed for this project.

II. Rule Applicability

The papermill facility is a minor facility since it does not meet the definition of major facility contained in Florida Administrative Code Rule 17-2.100(95).

The proposed project is located in an area classified as nonattainment for ozone according to Florida Administrative Code Rule 17-2.410(1). The project is located in an area classified as unclassifiable for the pollutant sulfur dioxide according to Florida Administrative Code Rule 17-2.430(2). The project is located in an area classified as attainment for the remaining criteria pollutants according to Florida Administrative Code Rule

17-2.420. The project is also located in the area of influence of the Jacksonville particulate matter nonattainment area.

The proposed project is exempt from the requirements of Florida Administrative Code Rule 17-2.500 Prevention of Significant Deterioration according to Florida Administrative Code Rule 17-2.500(2)(d)3. since this project is a minor increase to a minor facility.

Since no significant increase of volatile organic compound emissions are emitted from this source, the project is exempt from the requirements of Florida Administrative Code Rule 17-2.500 New Source Review for Nonattainment Areas for the Duval County ozone nonattainment area. The project is exempt from the New Source Review Requirements for the Jacksonville particulate matter nonattainment area according to Florida Administrative Code Rule 17-2.510(2)(a)2.b.

The proposed project, therefore, will be permitted according to the requirements found in Florida Administrative Code Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements.

The project is subject to the requirements of Florida Administrative Code Rule 17-2.660(2)(a) and (b) Standards of Performance for New Stationary Sources for gas turbines (40 CFR 60.330, Subpart GG).

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations:

The pollutants emitted during the operation of the cogeneration turbines are the contaminants generated by combustion sources. The emission estimates are based upon emission rates from the turbine manufacturer and from factors contained in AP-42, Compilation of Air Pollutant Emission Factors. Since this project involves the placing of three existing boilers on standby status with an additional boiler being used for auxiliary steam production, the net emission changes are examined in this case. The current boiler emissions from the papermill facility are:

Current Emissions From Boilers

Pollutant	Natural gas (lb/hr)	No. 6 Fuel Oil (lb/hr)	Total Annual* tons/year
PM	0.53	12.13	4.5
SO ₂	0.06	158.72	34.1
NOx	14.94	37.07	60.2
CO	3.74	3.37	13.8
VOC	0.30	0.19	1.1

* Based upon operating 7004.4 hours per year on natural gas and 427.2 hours per year on fuel oil with 1.5% sulfur content.

The proposed project involves the construction of two 37 MMBtu/hr cogeneration turbines and the usage of one of the four existing boilers for auxiliary steam production. Natural gas is the primary fuel with LPG as the secondary fuel for the turbine and No. 6 fuel oil as the secondary fuel for the boiler.

The proposed emission rates are:

Pollutant	Turbine Emissions		Boiler Emissions		Total Annual* TPY
	Nat. gas lb/hr	LPG lb/hr	Nat. gas (lb/hr)	LPG (lb/hr)	
PM	1.20	1.39	0.16	3.69	6.8
SO ₂	0.05	1.10	0.02	48.28	10.8
NOx	24.0	24.0	4.48	11.28	126.2
CO	2.4	2.4	1.12	1.03	15.4
VOC	0.22	0.23	0.09	0.06	1.4

* Based upon operating 8332.8 hours per year on natural gas and 427.2 hours per year on secondary fuel.

Therefore, the net change in annual emissions from this project are:

Pollutant	Emissions (TPY)				
	TSP	SO ₂	NO _x	CO	VOC
Present Conditions: Boilers	4.5	34.1	60.2	13.8	1.1
Proposed conditions: Turbines	5.3	0.4	105.1	10.5	1.0
Boilers	<u>1.5</u>	<u>10.4</u>	<u>21.1</u>	<u>4.9</u>	<u>0.4</u>
	6.8	10.8	126.2	15.4	1.4
Net increase or decrease	2.3	-23.3	66.0	1.6	0.3

The emission factors used in AP-42 have been updated recently. The 8/82 version was used by the Bureau in its emission calculations. The emission factors that were changed are as follows:

Pollutant	Fuel	Emission Factor Changes	
		From	To
PM	natural gas	15 lb/million CF	5 lb/million CF
CO	natural gas	17 lb/million CF	35 lb/million CF
NO _x	natural gas	230 lb/million CF	140 lb/million CF
NO _x	fuel oil	60 lb/1000 gal	55 lb/1000 gal

B. Air Quality Analysis:

Since the increase of emissions are exempted from the requirements of Florida Administrative Code Rule 17-2.500, Prevention of Significant Deterioration, an ambient air quality analysis is not required.

IV. CONCLUSIONS

Analysis of the emission rates proposed by the applicant demonstrates that the project will comply with the new source performance standards for stationary gas turbines. The monitoring and testing requirements contained in Part 40 CFR Sections 60.334 and 60.335 shall be made requirements of the permit.

Since emissions from the facility are below 250 tons per year, the project is exempt from the prevention of Significant Deterioration requirements contained in Florida Administrative Code Rule 17-2.500.

Since the facility is a minor source of VOC emissions it is exempt from the new source review requirements for nonattainment areas contained in Florida Administrative Code Rule 17-2.510.

The existing boiler operating permits shall be amended to comply with the information submitted in this construction permit application as it affects that operating permit.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all applicable requirements of Florida Administrative Code Rule Chapter 17-2.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Fl 32206-0197

Permit Number: AC 16-56235
Expiration Date: February 28, 1985
County: Duval
Latitude/Longitude: 30° 22' 52"N/
81° 38' 01"W
Project: Two 37MMBtu natural gas
fired cogeneration turbines with
LPG as the alternate fuel

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

For the construction of a cogeneration facility consisting of two 37MMBtu/hr natural gas fired turbines with LPG as the alternate fuel for the production of electricity and steam to be located at the paper mill building, 6825 Evergreen Avenue, Jacksonville, Florida. The Universal Transverse Mucator (UTM) coordinates of the proposed source are Zone 17, 438.9 km East, and 3361.2 km North.

Construction shall be in accordance with the attached permit application and plans, documents, and drawings except as otherwise noted on pages 5-6 "Specific Conditions".

Attachments are as follows:

1. Application to construct Air Pollution Sources, DER Form 17-1.122(16).
2. Response to incompleteness letter, received February 21, 1983 with revised application to construct air pollution sources, DER Form 17-1.122(16).

PERMITTEE:

United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I. D. Number:

Permit Number: AC 16-56235
Expiration Date: February 28, 1985

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, unless specifically authorized by an order from the department.

PERMITTEE:

United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I. D. Number:

Permit Number: AC 16-56235
Expiration Date: February 28, 1985

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information:

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

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida
32206-0197

I. D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

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.

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I. D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

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. Maximum allowable emissions from each turbine shall be:

Pollutant	Natural gas fired (lb/hr)	LPG fired (lb/hr)	Total Annual Emissions
PM	0.60	0.70	2.7
SO ₂ 0.8% S in fuel by weight or 150 ppm	0.03	0.55	0.2
NOx 150 ppm	12.0	12.0	52.6
VOC	0.11	0.12	0.5
CO	1.20	1.20	5.3

PERMITTEE:
United States Gypsum Co.
P. O. Box 3197
Jacksonville, Florida 32206-0197

I.D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

SPECIFIC CONDITIONS:

2. Maximum hours of operation for each turbine when burning natural gas shall be 8332.8 hours per year and when burning LPG 427.2 hours per year.

3. Maximum heat input of each turbine shall be 37 MMBtu/hr.

4. Operating permit AO 16-31708 shall be amended when the operating permit is submitted for this project to reflect the change in status of boilers 2, 3, and 4 to standby and boiler no. 1 to operate a maximum of 8332.8 hours per year firing natural gas and 427.2 hours per year when firing no. 6 fuel oil with 1.5% sulfur content and to reflect the maximum emissions contained in section III of the preliminary determination.

5. For water injection to control NOx emissions a continuous monitoring system to monitor and record the fuel consumption and ratio of water to fuel being fired in the turbine shall be installed and operated as contained in 40 CFR 60.334(a). The applicant shall monitor the sulfur and nitrogen content of the fuel being fired in the turbine with the frequency as contained in 40 CFR 60.334(b).

6. Compliance with the emission limitations shall be determined by nitrogen oxide testing using DER Method 20 as specified in Florida Administrative Code Rule 17-2.700.

7. Compliance with the process limitations shall be determined by record keeping of the daily hours of operation of each turbine, and the daily amount of fuel combusted by fuel type in each turbine. An annual operating report of this information for each calendar year shall be submitted to the Jacksonville Bio-Environmental Services Division Office by March 1 of the next year.

PERMITTEE
United States Gypsum Co.
P. O. Box 3197
Jacksonville, FL 32206-0197

I. D. Number:
Permit Number: AC 16-56235
Expiration Date: February 28, 1985

SPECIFIC CONDITIONS:

8. Prior to ninety days before the expiration of this permit, a complete application for an operating permit shall be submitted to the Jacksonville Bio-Environmental Services Division Office. Full operation of the sources may then be conducted in compliance with the terms of this permit until expiration or receipt of an operating permit.

Issued this ___ day of _____, 1983

**STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION**

VICTORIA J. TSCHINKEL, Secretary

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



March 8, 1983 *Bill Sohn*

Mr. Clair Fancy
Deputy Director
Central Air Permitting Section
Dept. of Environmental Regulation
2600 Blainstone Road
Tallahassee, Florida 32301

DER
MAR 11 1983
BAQM

Re: US Gypsum

Dear Mr. Fancy:

Bio-Environmental Services Division (BESD) has reviewed the revised Construction Permit application for the captioned source and the following comments are offered:

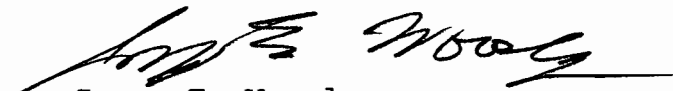
- (1) Who is the manufacturer and what are the model numbers of the proposed combustion turbines?
- (2) Copies of the manufacturer's emission tests and data should be provided.
- (3) Attachment "A" indicates two turbines will be constructed. Are the turbines identical? Will they be used simultaneously?
- (4) Is the 24 lbs/hr NO₂ emission rate based upon both turbines operating at 100% of design capacity or 85% of design capacity?
- (5) The AP-42 emission factor for NO_x from industrial boilers (i.e.: 230#/10⁶ ft³) does not agree with the emission factor used in the current boiler permit and the latest AP-42 (i.e.: 140#/10⁶ ft³). It is suggested this discrepancy be addressed.
- (6) How many boilers will remain operational? How will their use be restricted?
- (7) Is the captioned permit application for the combustion turbines or the combustion turbines and boilers?



PAGE 2
US Gypsum

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

Very truly yours,

A handwritten signature in black ink, appearing to read "Jerry E. Woosley", with a long horizontal flourish extending to the right.

Jerry E. Woosley
Assistant Engineer

JEW/vj
Enclosure

ADDENDUM TO PERMIT APPLICATION
FOR
AIR POLLUTION SOURCES

Permit A016-31708

PAPER MILL BOILERSOperating Hours:

$$24 \text{ hr./day} \times 6.67 \text{ day/wk.} \times 52 \text{ wk./yr.} = \underline{8324 \text{ hr./yr.}}$$

Airborne Contaminants Discharged:

The only contaminants are those resulting from the complete combustion of fuel.

Natural Gas: (Primary Fuel) (per Boiler)1) Actual Sulfur Oxides (SO₂):

$$0.0235 \times 10^6 \text{ CF/hr.} \times 0.05621 \text{ lb./CF} \times \frac{0.0011\% \text{S}}{100\%} \times 2 \frac{\text{SO}_2}{\text{S}} = \underline{0.03 \text{ lb./hr.}}$$

$$0.03 \text{ lb./hr.} \times 8324 \text{ hr./yr.} \times \text{ton}/2000 \text{ lb.} = \underline{0.12 \text{ ton/yr.}}$$

Potential same as actual.

2) Actual Nitrogen Oxides (NO₂):

Use 138 lb. NO₂/MMCF per AP-42.

$$0.0235 \text{ MMCF/hr.} \times 138 \text{ lb. NO}_2/\text{MMCF} = \underline{3.24 \text{ lb./hr.}}$$

$$3.24 \text{ lb./hr.} \times 8324 \text{ hr./yr.} \times \text{ton}/2000 \text{ lb.} = \underline{13.48 \text{ ton/yr.}}$$

Potential same as actual.

#6 Fuel Oil: (Secondary Fuel) (per Boiler)

Actual Particulates (Ash):

Use 18 lb. Ash/1000 gal. per AP-42

$$24.6 \times 10^6 \text{ BTU/hr.} \times \frac{\text{gal.}}{144,439 \text{ BTU}} = 170.3 \text{ gal./hr.}$$

$$170.3 \text{ gal./hr.} \times 18 \text{ lb. Ash}/1000 \text{ gal.} = \underline{3.07 \text{ lb./hr.}}$$

$$3.07 \text{ lb./hr.} \times 8324 \text{ hr./yr.} \times \text{ton}/2000 \text{ lb.} = \underline{12.78 \text{ ton/yr.}}$$



TABLE 1.4-1. UNCONTROLLED EMISSION FACTORS FOR NATURAL GAS COMBUSTION^a

Furnace Size & Type (10 ⁶ Btu/hr heat input)	Particulates ^b		Sulfur ^c Dioxide		Nitrogen ^{d,e} Oxide		Carbon ^{f,g} Monoxide		Volatile Organics			
	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	Nonmethane		Methane	
	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	kg/10 ⁶ m ³	lb/10 ⁶ ft ³
Utility boilers (>100)	16-80	1-5	9.6	0.6	8800 ^h	550 ^h	640	40	23	1.4	4.8	0.3
Industrial boilers (10 - 100)	16-80	1-5	9.6	0.6	2240	140	560	35	44	2.8	48	3
Domestic and commercial boilers (<10)	16-80	1-5	9.6	0.6	1600	100	320	20	84	5.3	43	2.7

^aAll emission factors are expressed as weight per volume fuel fired.

^bReferences 15-18.

^cReference 4 (based on an average sulfur content of natural gas of 4600 g/10⁶ Nm³ (2000 gr/10⁶ scf)).

^dReferences 4-5,7-8,11,14,18-19,21.

^eExpressed as NO₂. Test results indicate that about 95 weight % of NO_x is NO.

^fReferences 4,7-8,16,18,22-25.

^gReferences 16 and 18. May increase 10 to 100 times with improper operation or maintenance.

^hUse 4400 kg/10⁶ m³ (275 lb/10⁶ ft³) for tangentially fired units. At reduced loads, multiply this factor by the load reduction coefficient given in Figure 1.4-1. See text for potential NO_x reductions by combustion modifications. Note that the NO_x reduction from these modifications will also occur at reduced load conditions.

B. Emission Rates (using AP-42 Factors)

$$\begin{aligned} \text{TSP: } & (747.5 \times 10^6 \text{ CF/yr.})(15\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(18\#/10^3 \text{ gal.}) \\ & = 16395\#/yr. \text{ or } \underline{8.20 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{SO}_2: & (747.5 \times 10^6 \text{ CF/yr.})(0.6\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.}) [(157)(1.5\%)] \\ & \text{\#/10}^3 \text{ gal.}) = 68,249\#/yr. \text{ or } \underline{34.12 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{CO: } & (747.5 \times 10^6 \text{ CF/yr.})(17\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(5\#/10^3 \text{ gal.}) \\ & = 14,147\#/yr. \text{ or } \underline{7.07 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{NO}_2: & (747.5 \times 10^6 \text{ CF/yr.})(230\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(60\#/10^3 \text{ gal.}) \\ & = 189,199\#/yr. \text{ or } \underline{94.60 \text{ TPY}} \end{aligned}$$

UNITED STATES GYPSUM COMPANY //

Post Office Box 3197/Jacksonville, Florida 32206-0197 //

February 16, 1983

Mr. C. H. Fancy, Deputy Chief
Bureau of Air Quality Management
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

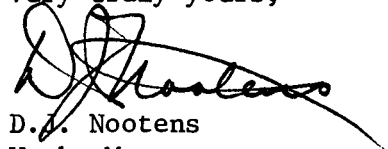
DER
FEB 21 1983
BAQM

Dear Mr. Fancy:

Attached for your consideration is our revised permit application for construction of a co-generation facility. When originally submitted, the application was assigned file number AC 16-56235.

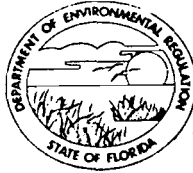
The application has been revised to incorporate the suggestions made in your letter of June 16, 1982, as well as the stack geometry and flow characteristics which had been omitted.

Very truly yours,


D.J. Nootens
Works Manager

DJN:s1

Copy to Mr. Jerry Woosley, Assistant Engineer
Bio-Environmental Services Division
Jacksonville, Florida



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

DER
FEB 21 1983
BAQM

SOURCE TYPE: Stationary Gas Turbines [x] New¹ [] Existing¹
 APPLICATION TYPE: [x] Construction [] Operation [] Modification
 COMPANY NAME: United States Gypsum Company COUNTY: Duval
 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) Paper Mill Co-Generation
 SOURCE LOCATION: Street 6825 Evergreen Avenue City Jacksonville
 UTM: East 4 38 900 North 33 61 200
 Latitude 30 ° 22 ' 52 "N Longitude 81 ° 38 ' 01 "W
 APPLICANT NAME AND TITLE: D. J. Nootens, Works Manager
 APPLICANT ADDRESS: 6825 Evergreen Avenue, Jacksonville, Fla. 32206

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

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

*Attach letter of authorization

Signed: [Signature]
D. J. Nootens, Works Manager
 Name and Title (Please Type)
 Date: 2/17/83 Telephone No. (904) 768-2501

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.

(Affix Seal)



Signed: [Signature]
Ragan M. Womack
 Name (Please Type)
United States Gypsum Co.
 Company Name (Please Type) Jacksonville 3220
6825 Evergreen Avenue, P.O. Box 3197,
 Mailing Address (Please Type)
 Date: 2/17/83 Telephone No. (904) 768-2501

Florida Registration No. 17417

¹See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)
 DER FORM 17-1.122(16) Page 1 of 10

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.

Installation of gas turbine for co-generation of electrical power in the papermill.
Emission control is the use of L.P. gas in place of oil as an alternate fuel on the
turbines, to prevent significant increases in SO₂.

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

Start of Construction September 1983 Completion of Construction September 1984

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.)

L.P. Gas: \$164,000 (equipment only)

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

Permit #A016-31708 Four Papermill Boilers. Issued November 18, 1980; expires
October 31, 1985.

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 No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr 8760; if seasonal, describe: _____

G. If this is a new source or major modification, answer the following questions. (Yes or No) **Does not apply.**

1. Is this source in a non-attainment area for a particular pollutant? _____

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. _____

3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. _____

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

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? _____

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		
Recycled Paper	-	-	17,000	Waste Paper Processing
Water	-	-	57,000	" " "

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

- Total Process Input Rate (lbs/hr): 74,000#/hr. (including water)
- Product Weight (lbs/hr): 16,000#/hr.

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	
TSP	1.84	8.09	0.1#/10 ⁶ BTU	7.95	1.84	8.09	1,2,3,5,6*
SO ₂	2.45	10.75	-	-	2.45	10.75	"
CO	2.96	12.98	-	-	2.96	12.98	"
NO ₂	31.57	138.29	-	-	31.57	138.29	"

*Normal operation

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)

¹See Section V, Item 2.

²Reference 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)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas (Turbine, Boiler)	.112 MMCF	.112	104
L.P.G. (Turbine Alt.Fuel)	817 Gal.	817 Gal.	74
#6 Fuel Oil (Boiler Alt.Fuel)	205 Gal.	205 Gal.	30

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

Fuel Analysis: Natural gas - none

Percent Sulfur: L.P.G. - 15 grains/SCF Percent Ash: None

Density: .043#/SCF (natural gas) Typical Percent Nitrogen: 0.51% (natural gas)

Heat Capacity: 1028 BTU/SCF (HHV) - 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 10 Est. Maximum 15 Est.

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

None

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

Stack Height: * ft. Stack Diameter: * ft.

Gas Flow Rate: 42,320 ACFM Gas Exit Temperature: 165 °F.

Water Vapor Content: - % Velocity: * FPS

*Refer to Attachment "D"

SECTION IV: INCINERATOR INFORMATION

Does not apply.

Type of Waste	Type O (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

- 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
<u>SO₂</u>	<u>0.8% < Sulfur in fuel or .015% PPM < in exhaust.</u>
<u>NO₂</u>	<u>150 PPM < in exhaust.</u>

- 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
<u>All</u>	<u>See attachment "A".</u>

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

- | | |
|---------------------------|----------------------|
| 1. Control Device/System: | 4. Capital Costs: |
| 2. Operating Principles: | 6. Operating Costs: |
| 3. Efficiency: * | 8. Maintenance Cost: |
| 5. Useful Life: | |
| 7. Energy: | |
| 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
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

(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

A. Company Monitored Data

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

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

ATTACHMENT "A"

Emission Calculations

Papermill Co-Generation

Jacksonville, Florida

SIC 2632

I. PRESENT CONDITIONS

Average annual operating hours - 7431.6

(Based on 1980 & 1981 actual)

Boiler heat input (4 boilers) - 98.4×10^6 BTU/hr.

Primary fuel - Natural Gas: HHV 1028 BTU/CF

LHV 922 BTU/CF

Alternate fuel - #6 Fuel Oil: HHV 153,200 BTU/gal.

LHV 146,000 BTU/gal.

Sulfur = 1.5%

Average annual gas curtailment - 427.2 hours

A. Fuel Usage (based on LHV)

Natural Gas: $(98.4 \times 10^6 \text{ BTU/hr.})(7431.6 - 427.2 \text{ hr.}) \left(\frac{1}{922 \text{ BTU/CF}} \right) =$

$747.5 \times 10^6 \text{ CF/yr.}$

#6 Fuel Oil: $(98.4 \times 10^6 \text{ BTU/hr.})(427.2 \text{ hr.}) \left(\frac{1}{146,000 \text{ BTU/gal.}} \right) =$

$287.9 \times 10^3 \text{ gal./yr.}$

B. Emission Rates (using AP-42 Factors)

$$\begin{aligned} \text{TSP: } & (747.5 \times 10^6 \text{ CF/yr.})(15\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(18\#/10^3 \text{ gal.}) \\ & = 16395\#/yr. \text{ or } \underline{8.20 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{SO}_2: & (747.5 \times 10^6 \text{ CF/yr.})(0.6\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.}) \left[(157)(1.5\%) \right. \\ & \left. \#/10^3 \text{ gal.} \right] = 68,249\#/yr. \text{ or } \underline{34.12 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{CO: } & (747.5 \times 10^6 \text{ CF/yr.})(17\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(5\#/10^3 \text{ gal}) \\ & = 14,147\#/yr. \text{ or } \underline{7.07 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{NO}_2: & (747.5 \times 10^6 \text{ CF/yr.})(230\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(60\#/10^3 \text{ gal}) \\ & = 189,199\#/yr. \text{ or } \underline{94.60 \text{ TPY}} \end{aligned}$$

II. PROPOSED CONDITIONS

Turbine Fuel Input - 74×10^6 BTU/Hr. (Total 2 Turbines)

Boiler Fuel Input - 30.0×10^6 BTU/Hr.

Primary Fuel (Turbines & Boiler) - Natural Gas

Alternate Fuel (Turbine - L.P.G.)

Alternate Fuel (Boiler) - #6 Fuel Oil

Fuel Heating Values (LHV): Natural Gas - 922 BTU/CF

#6 Fuel Oil - 146,000 BTU/Gal.

L.P.G. - 90,500 BTU/Gal.

Turbines

Natural Gas 74×10^6 BTU/Hr. \div 922 BTU/CF = $.080 \times 10^6$ CF/Hr.

L.P.G. 74×10^6 BTU/Hr. \div 90,500 BTU/Gal. = $.817 \times 10^3$ Gal./Hr.

Boiler

Natural Gas 30×10^6 BTU/Hr. \div 922 BTU/CF = $.032 \times 10^6$ CF/Hr.

#6 Fuel Oil 30×10^6 BTU/Hr. \div 146,000 = $.205 \times 10^3$ Gal./Hr.

Operating Hours

Primary Fuel 8332.8

Alternate Fuel 427.2

8760.0

EMISSION RATES (AP-42 Factors, except as noted)

TSP:

Turbines $(.080 \times 10^6 \text{ CF/Hr.})(15\#/10^6\text{CF})(8332.8 \text{ Hr.})+$
 $(.817 \times 10^3 \text{ Gal./Hr.})(1.7\#/10^3 \text{ Gal.})(427.2 \text{ Hr.}) =$ 10,593 #/Yr.
'or' 5.30 TPY

Boiler $(.032 \times 10^6 \text{ CF/Hr.})(15\#/10^6\text{CF})(8332.8 \text{ Hr.})+$
 $(.205 \times 10^3 \text{ Gal./Hr.})(18\#/10^3 \text{ Gal.})(427.2 \text{ Hr.}) =$ 5,576 #/Yr.
'or' 2.79 TPY

SO₂

Turbines $(.080 \times 10^6 \text{ CF/Yr.})(0.6\#/10^6 \text{ CF})(8332.8)+$
 $(.817 \times 10^3 \text{ Gal./Hr.})(1.35\#/10^3 \text{ Gal.})(427.2 \text{ Hr.}) =$ 871 #/Hr.
'or' 0.44 TPY

Boiler $(0.32 \times 10^6 \text{ CF/Yr.})(0.6\#/10^6\text{CF})(8332.8)+$
 $(.205 \times 10^3 \text{ Gal./Hr.})(157)(1.5\%)\#/10^3 \text{ Gal.})(427.2 \text{ Hr.}) =$ 20,624 #/Yr.
'or' 10.31 TPY

CO

Based on Turbine manufacturer's data, CO emission rate is:

2.4#/Hr. (2 Turbines) for gaseous fuels
 $(2.4\#/Hr.)(8760 \text{ Hr./Yr.}) =$ 21,024 #/Yr. 'or' 10.5 TPY

Boiler $(.032 \times 10^6 \text{ CF/Hr.})(17\#/10^6\text{CF})(8332.8 \text{ Hr.})+$
 $(.205 \times 10^3 \text{ Gal./Hr.})(5\#/10^3 \text{ Gal.})(427.2 \text{ Hr.}) =$ 4971#/Yr.
'or' 2.48 TPY

NO₂

Based on Turbine manufacturer's data, NO₂ emission rate is 24#/Hr. (2 Turbines)
 $(24\#/Hr.)(8760 \text{ Hr./Yr.}) =$ 210,240#/Yr. 'or' 105 TPY

Boiler $(.032 \times 10^6 \text{ CF/Hr.})(230\#/10^6 \text{ CF})(8332.8)+$
 $(.205 \times 10^3 \text{ Gal./Hr.})(60\#/10^3 \text{ Gal.})(427.2 \text{ Hr.}) =$ 66,583 #/Yr.
'or' 33.29 TPY

EMISSION SUMMARY

Tons Per Year

	<u>TSP</u>	<u>SO₂</u>	<u>CO</u>	<u>NO₂</u>
Present Conditions: Boilers	8.20	34.12	7.07	94.6
Proposed Conditions: Turbines	5.30	0.44	10.50	105.00
Boilers	<u>2.79</u>	<u>10.31</u>	<u>2.48</u>	<u>33.29</u>
	8.09	10.75	12.98	138.29
NET INCREASE OR DECREASE	-0.11	-23.37	+5.91	+43.69

ATTACHMENT "B"

Calculation for SO₂ & NO₂

Concentrations in Exhaust Stack from Turbine Operation

Papermill Co-Generation -
Jacksonville, Florida

Exhaust Conditions - 42,320 ACFM at 200°F

NO₂ - 24.45#/Hr.

SO₂ - 0.27#/Hr.

Molecular Wt. NO₂ - 46

" " SO₂ - 64

$$42,320 \text{ ACFM} \times \frac{530}{660} = 33,984 \text{ SCFM}$$

Concentration

NO₂:

$$\frac{24.45\#/hr. \times (10^6 \# - \text{Moles. Air})}{46\#-NO_2} \times \frac{33,984 \text{ SCF}}{\text{Min.}} \times \frac{60 \text{ Min.}}{\text{Hr.}} \times \frac{1.0 \# \text{ Mole. Air}}{378.5 \text{ SCF}} = \underline{\underline{98.66 \text{ PPM}}}$$

Concentration

SO₂:

$$\frac{0.27\#/Hr. \times (10^6 \# - \text{Moles. Air})}{64\# SO_2} \times \frac{33,984 \text{ SCF}}{\text{Min.}} \times \frac{60 \text{ Min.}}{\text{Hr.}} \times \frac{1.0\# \text{ Mole. Air.}}{378.5 \text{ SCF}} = \underline{\underline{0.78 \text{ PPM}}}$$

New Source Performance Standards: NO₂ - 150 PPM

SO₂ - 0.015% by volume

SECTION III - AIR POLLUTION SOURCES AND CONTROL DEVICES

C.

<u>Name of Contaminant</u>	<u>Emission</u>		<u>Allowed Emission Rate</u>	<u>Allowable Emission Rate</u>	<u>Potential Emission</u>		<u>Flow Diagram</u>
	<u>#/Hr.</u>	<u>T/Yr.</u>			<u>#/Hr.</u>	<u>T/Yr.</u>	
TSP	1.84	8.09	0.1#/10 ⁶ BTU	7.95	1.84	8.09	1,2,3,5,6
SO ₂	2.45	10.75	-	-	2.45	10.75	1,2,3,5,6
CO	2.96	12.98	-	-	2.96	12.98	1,2,3,5,6
NO ₂	31.57	138.29	-	-	31.57	138.29	1,2,3,5,6

E. FUELS

<u>TYPE</u>	<u>CONSUMPTION</u>		<u>Maximum Heat Input BTU 10⁶/Hr.</u>
	<u>Avg./Hr.</u>	<u>Max./Hr.</u>	
Natural Gas (Turbine, Boiler)	.112 MMCF	.112 MMCF	104
L.P.G. (Turbine Alt. Fuel)	817 Gal.	817 Gal.	74
#6 Fuel Oil (Boiler Alt. Fuel)	205 Gal.	205 Gal.	30

ATTACHMENT "C"

PERMIT NO.: A016-31708
APPLICANT: U.S. Gypsum Company
Source: Four Paper Mill Steam Boilers

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

- a. Permit Application
- b. Plot Plans
- c. Additional Information

2. Testing of emissions must be accomplished at ± 10% of the rate stated in the permit.

3. Test the emissions for the following pollutant(s) at intervals indicated from the date of September 1, 1980 and submit a copy of the test report to the Jacksonville Bio-Environmental Services Division and a summary to this office within 15 days after completion of the testing: *

Visible Emissions: Nat'l Gas - upon request
No. 6 Fuel Oil - (if used) to be submitted by 10th day in use.
*(Notify this office 2 weeks prior to testing)

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

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

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

Pollutant	Emission Rate	Maximum Allowable Emission
Particulates	17-2.05(6)E(2) 0.1 lb/MTtu	9.84 lb/hr, 41 T/yr
SO ₂	17-2.05(6)E(2) 1.5% S Fule (1.65 lb/hr)	162.4 lb/hr, 675.7 T/yr
Visible Emissions	17-2.05(6)E(2)	20%, 40% - 2 min/hr maximum

Expiration Date October 31, 1985

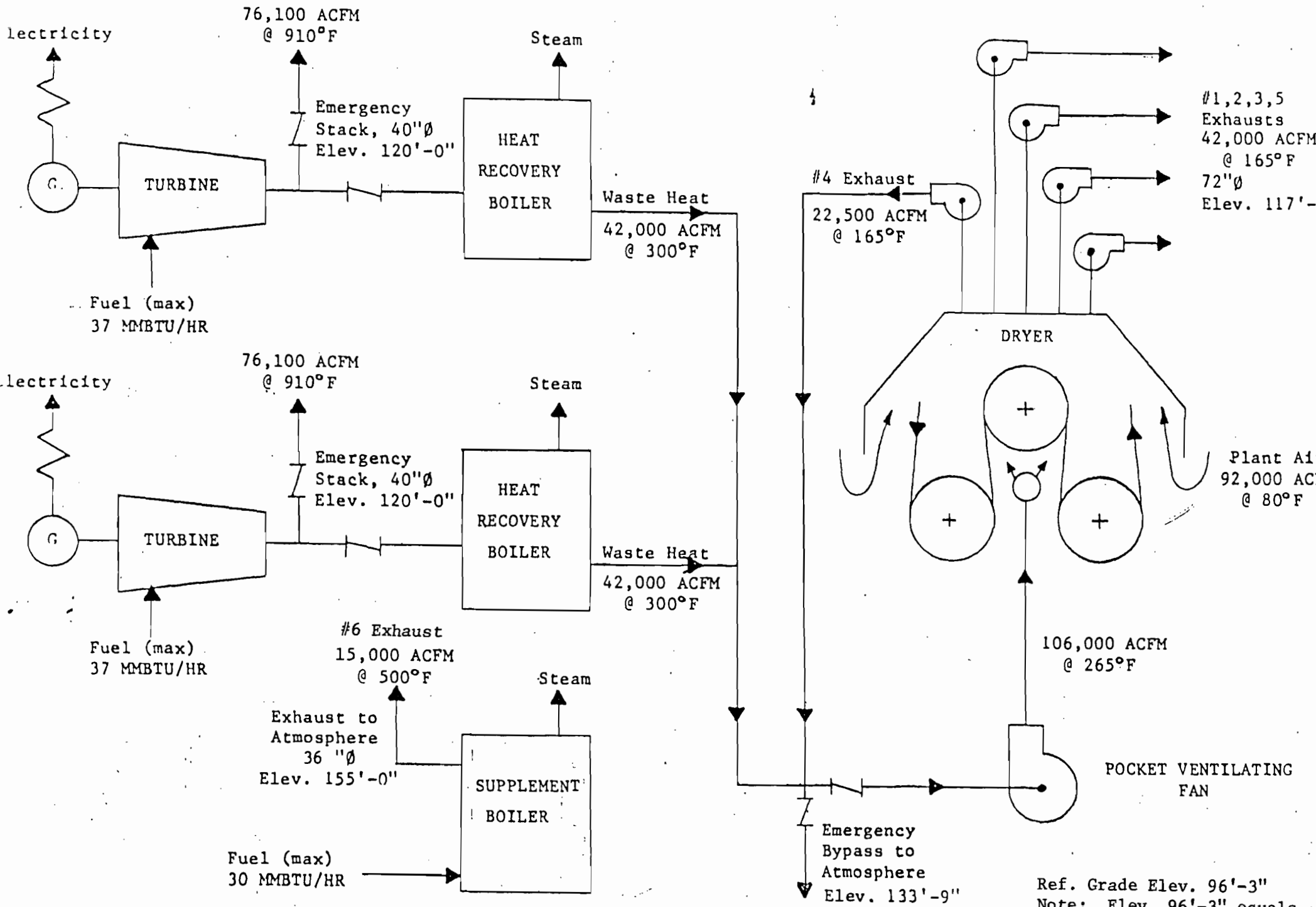
Issued this 18th day of November, 1980

Walter W. Honour
Walter W. Honour, Division Chief
Bio-Environmental Services
City of Jacksonville

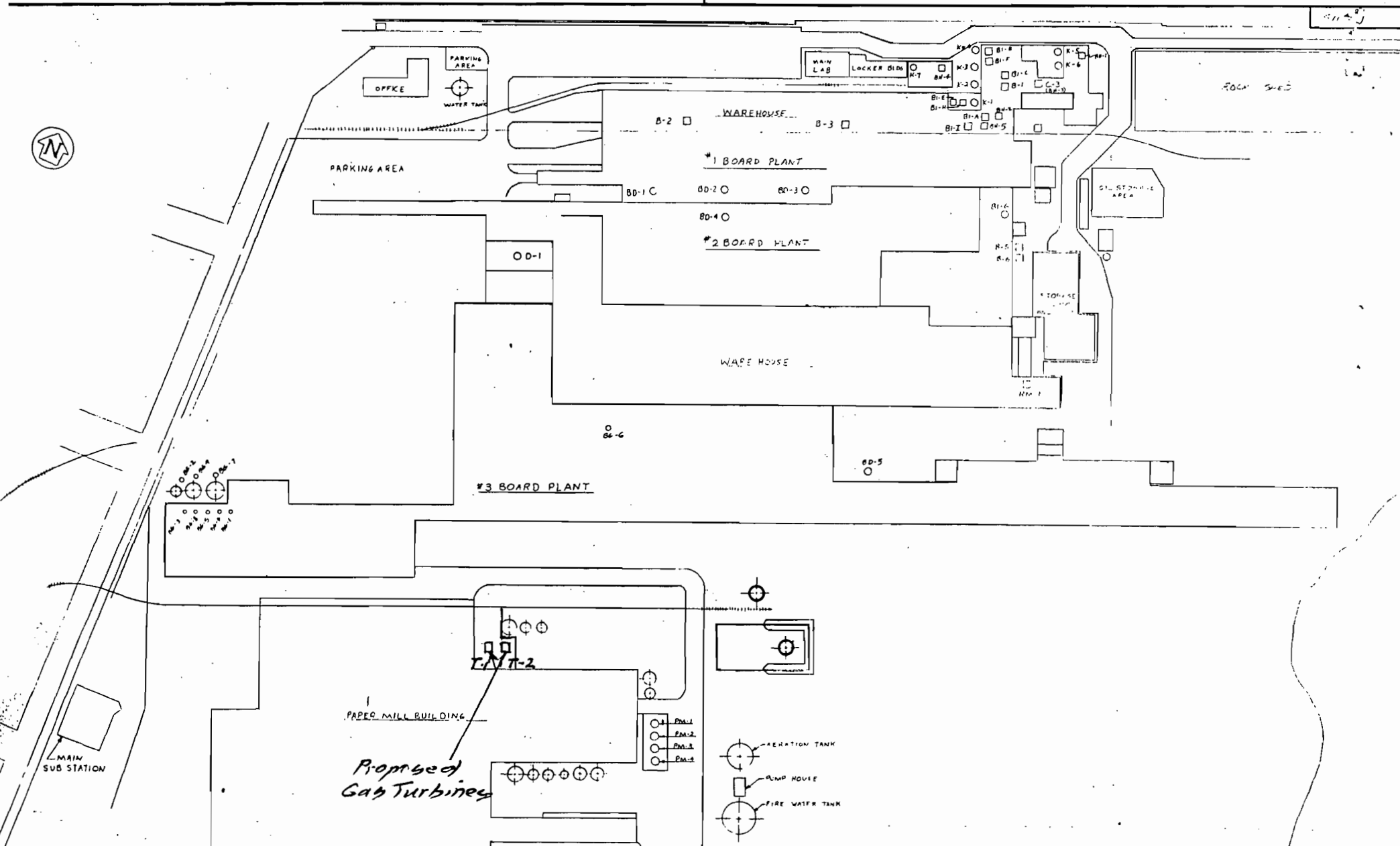
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

G. Doug Dutton
G. Doug Dutton
Sub-District Manager

ATTACHMENT II

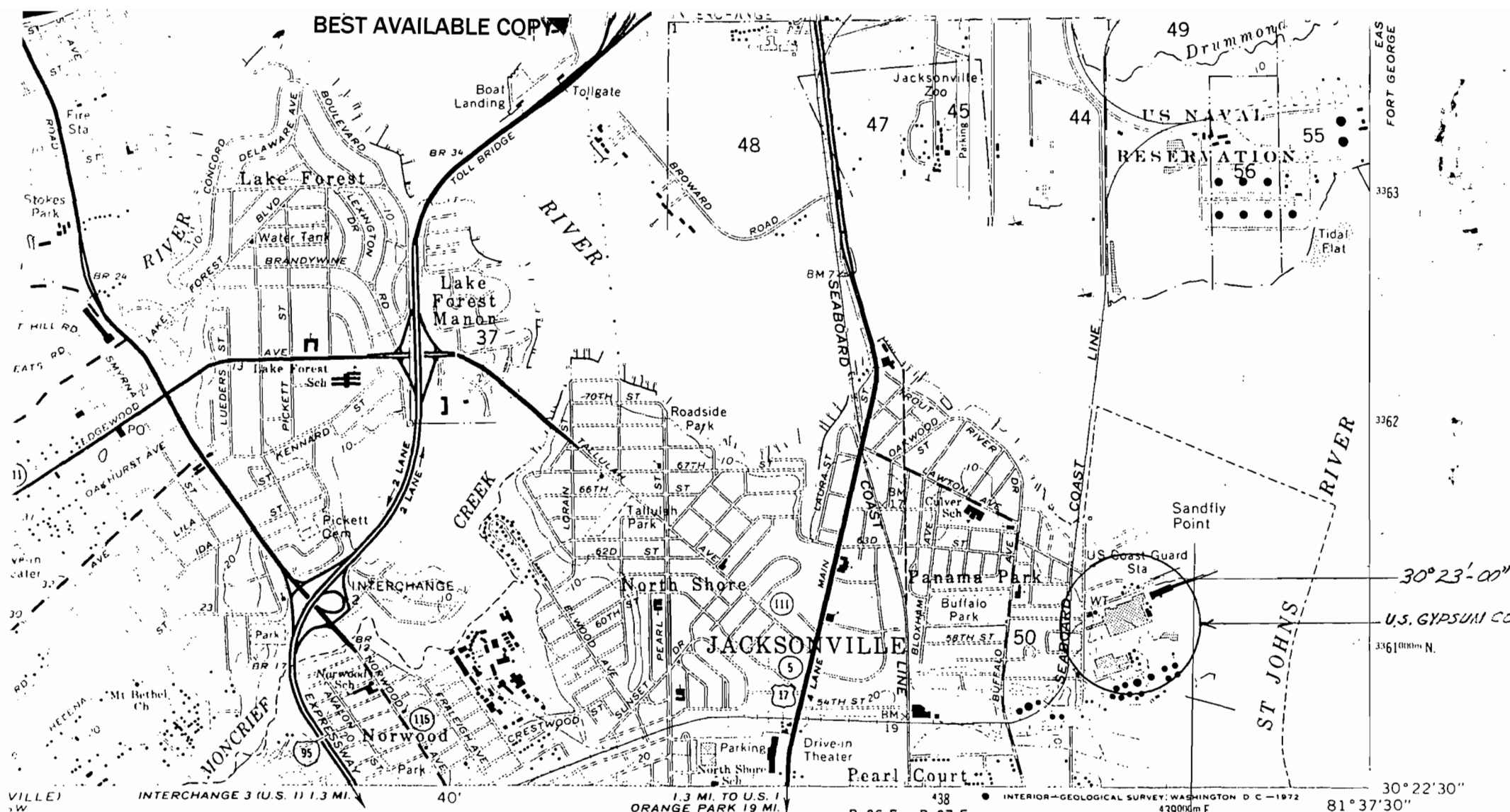


Ref. Grade Elev. 96'-3"
 Note: Elev. 96'-3" equals 10'-3" on City of Jax. datum.

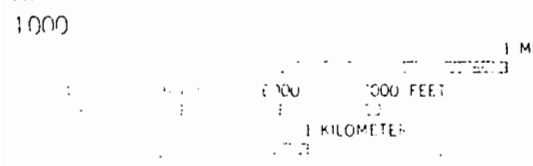


<p>NOTES:</p> <ul style="list-style-type: none"> 1-RECORD ALL CHANGES AND DISCREPANCIES IMMEDIATELY 2-NO COPY SHALL BE MADE 3-CHANGES TO BE MADE BY THE ENGINEER 4-THIS DRAWING IS THE PROPERTY OF THE UNITED STATES GYPSUM CO. AND IS TO BE KEPT IN THE OFFICE OF THE ENGINEER AT ALL TIMES 5-NO PARTS OF THIS DRAWING ARE TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF THE UNITED STATES GYPSUM CO. 	<p>DRAWN BY: W.F. WILLIAMS</p> <p>CHECKED BY: S.M. NEAS</p> <p>DATE: 7-30-60</p> <p>SCALE: NONE</p>	<p>UNITED STATES GYPSUM CO., CHICAGO, ILL.</p> <p>JACKSONVILLE, FLA.</p> <p>AIR POLLUTION SOURCES</p>	<p>PROJECT NO. 5113</p> <p>REV. 0</p>
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BEST AVAILABLE COPY



INTERCHANGE 3 (U.S. 1) 1.3 MI. 40' 1.3 MI. TO U.S. 1 ORANGE PARK 19 MI. R. 26 E. R. 27 E. 438 4390m E. 30° 23' - 00" 30° 22' 30" 81° 37' 30" 1936 1000m N.



VERTICAL DATUM: MEAN LOW WATER
 HORIZONTAL DATUM: MEAN HIGH WATER
 ELEVATION: MEAN LOW WATER



QUADRANGLE LOCATION

- 81° 37' - 00" ROAD CLASSIFICATION
- Heavy-duty ——— Light-duty - - - - -
 - Medium-duty - - - - - Unimproved dirt - - - - -
 - Interstate Route ○ U.S. Route ○ State Route

TROUT RIVER, FLA.

N3022.5—W8137.5/7.5

1964
 PHOTOREVISED 1970
 AMS 4644 I NW--SERIES V847

MAP ACCURACY STANDARDS
 SURVEY, WASHINGTON, D. C. 20242
 AND SYMBOLS IS AVAILABLE ON REQUEST

UNITED STATES GYPSUM COMPANY

Post Office Box 3197 / Jacksonville, Florida 32206

November 30, 1982

*Patty
John*

Mr. C. H. Fancy, Deputy Chief
Bureau of Air Quality Management
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

DER
DEC 02 1982
BAQM

Dear Mr. Fancy:

Pursuant to your request of November 9, 1982, we are hereby notifying your Department that United States Gypsum Company fully intends to proceed with submission of the environmental permit application for co-generation at the Jacksonville Paper Mill.

Several basic design changes have been considered over the past four (4) months, accounting for the delay in resubmittal of the permit forms. It is expected, however, that the application will be in your hands by January 15, 1983.

Please call me at (904) 768-2501 if you have any further questions.

Very truly yours,



D. J. Nootens
Works Manager

DJN:jw

Copy to Mr. Jerry Woosley, Assistant Engineer
Bio-Environmental Services Division
Jacksonville, Florida

PS Form 3811, Jan. 1979

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
- Show to whom and date delivered.....¢
 - Show to whom, date and address of delivery.....¢
 - RESTRICTED DELIVERY
Show to whom and date delivered.....¢
 - RESTRICTED DELIVERY.
Show to whom, date, and address of delivery. \$ ____
- (CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
 Mr. D.J. Nootens, Works Manager
 United States Gypsum Company
 6825 Evergreen Avenue
 Jacksonville, Florida 32206

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P16 7682405	

(Always obtain signature of addressee or agent)

I have received the article described above.
 SIGNATURE Addressee Authorized agent

4. DATE OF DELIVERY POSTMARK

A.R. Bankard

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:	CLERK'S INITIALS

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

June 16, 1982

Mr. D. J. Nootens, Works Manager
United States Gypsum Company
6825 Evergreen Avenue
Jacksonville, Florida 32206

Dear Mr. Nootens:

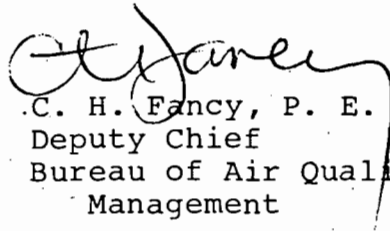
Your air source construction permit (AC 16-56235) has been transferred from the Jacksonville Bio-Environmental Services Division Office for processing according to our division of responsibility. The application has been found to be incomplete. The following information is needed to finish processing the permit.

In the section on stack geometry and flow characteristics, the stack height, stack diameter and velocity needs to be specified.

Since hours of different fuel usage is the method of estimating pollutant emissions, it should be pointed out that the maximum number of hours using propane listed in the permit application will become a permit limitation. If more hours of propane usage may be needed at the facility in the future, it would be best to revise your application at this time.

When the above items are answered, the processing of the permits will be completed. If you have any questions concerning this matter, please contact John Svec at (904)488-1344.

Sincerely,


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

CHF:JS:ras

cc: Jerry Woosley
Ragan Womack
Johnnie Cole

BEST AVAILABLE COPY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

June 1, 1982

D. J. Nootens, Works Manager
United States Gypsum Company
6825 Evergreen Avenue
Jacksonville, Florida 32206

Dear Mr. Nootens:

This is to acknowledge receipt of your application for the installation of two stationary gas turbines. Your receipt for the processing fee of \$20.00 is attached. The permit processing number assigned to this application is AC 16-56235. Please refer to this number on future correspondence.

If we may be of further assistance, please feel free to call at (904) 488-1344.

Sincerely,

Patty Adams
Bureau of Air Quality
Management

/pa

Attachment

cc: F. P. May

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



May 25, 1982

Mr. Clair Fancy, P.E., Director
Central Air Permitting Section
Bureau of Air Quality Management
Dept. of Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32301

DER

MAY 28 1982

Re: U.S. Gypsum

BAQM

Dear Mr. Fancy:

Enclosed is the Construction Permit application for U.S. Gypsum's two(2) stationary gas fired turbines. The application and processing fee (Check No. 35442) is being forwarded to your office for processing, pursuant to the permitting guidelines currently available to this Agency.

Bio-Environmental Services Division has reviewed this application and does not have any comments at the present time.

If we can be of further assistance, please advise.

Very truly yours,

Jerry E. Woosley
Assistant Air Pollution Engineer

JEW/vj

Enclosure

cc: Mr. Doug Dutton - DER



BEST AVAILABLE COPY

UNITED STATES GYPSUM COMPANY

JACKSONVILLE, FL

PLANT DISBURSEMENT ACCOUNT

TO: THE NORTHERN TRUST COMPANY, CHICAGO, ILLINOIS

No. 35442

2-15
710

DATE: MAY 20, 1982

AMOUNT

\$20.00

UNITED STATES GYPSUM COMPANY
AUTHORIZED SIGNATURE

PAY TO THE
ORDER OF

State Of Florida
Department of Environmental Regulations

J C Cropper



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

№ 33610

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from United States Gypsum Company Date May 28, 1982

Address 6825 Evergreen Ave., Jacksonville FL 32206 Dollars \$ 20.00

Applicant Name & Address Same as above

Source of Revenue _____

Revenue Code 0101 Application Number AC 16-56235

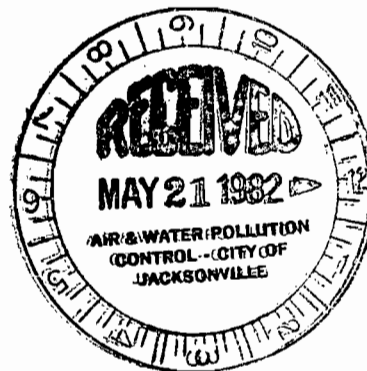
By Patricia E. Adams

UNITED STATES GYPSUM COMPANY

101 South Wacker Drive/Chicago, Illinois 60606

May 20, 1982

Mr. William A. Thomas
State Of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301



Dear Mr. Thomas:

Attached for your review is a permit application for the installation of two (2) stationary gas turbines, for the purpose of co-generating electric power. This application will answer all of the questions raised in your letter of November 13, 1981.

It should be noted that this request includes the paper mill ONLY. Adaptation of the co-generation technique to the Gypsum Board Plant at Jacksonville will be delayed until further Engineering refinements are completed.

Some of the important aspects of this application are:

1. Significant reductions in particulates and sulfur dioxide will be obtained. These decreases are the result of lower fuel oil usage by substituting L.P.G. in its place. (Attachment "A")
2. Modest increases in carbon dioxide and nitrogen oxides will result from the slight increase in fuel usage.
3. The turbines will comply with the New Source Performance Standards for Stationary Gas Turbines, Subpart 60.330 (Attachment "B").
4. When compared to existing emission limitations for the paper mill (Permit Number A016-31708, Attachment "C"), the projected emission rates show even greater reduction than the attached calculations. For particulates this reduction is 35.26 tons per year (41.0 tons permitted versus 4.74 tons projected); for sulfur dioxide, the decrease is 674.5 tons per year (675.7 tons permitted versus 1.17 tons projected).

DER

MAY 28 1982

BAQM

Mr. William A. Thomas
State Of Florida
Dept. Of Environmental Regulations

. . . Page 2

Please contact me directly (312/321-3769) if you have any questions regarding this proposal.

Sincerely,

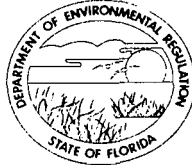
UNITED STATES GYPSUM COMPANY

A handwritten signature in cursive script that reads "F. P. May". The signature is written in dark ink and is positioned above the typed name.

F. P. May, Manager
Environmental Technology

FPM:sam

AC 16-56235



STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT
AIR POLLUTION SOURCES

DER

SOURCE TYPE: Stationary Gas Turbines New¹ Existing¹

MAY 28 1982

APPLICATION TYPE: Construction Operation Modification

COMPANY NAME: United States Gypsum Company COUNTY: Duval

BAOM

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) Papermill Co-generation

SOURCE LOCATION: Street 6825 Evergreen Avenue City Jacksonville

UTM: East 4 38 900 North 33 61 200

Latitude 30 ° 22 ' 52 "N Longitude 81 ° 38 ' 01 "W

APPLICANT NAME AND TITLE: D. J. Nootens, Works Manager

APPLICANT ADDRESS: 6825 Evergreen Avenue, Jacksonville, FL 32206

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of United States Gypsum Co.

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

*Attach letter of authorization

Signed: [Signature]

D. J. Nootens, Works Manager

Name and Title (Please Type)

Date: 5/19/82 Telephone No. (904) 768-2501

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: [Signature]

Ragan M. Womack

Name (Please Type)

United States Gypsum Co.

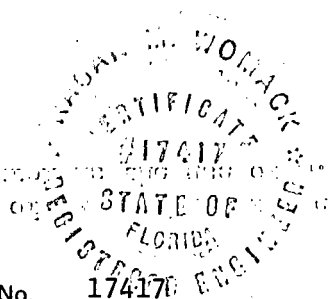
Company Name (Please Type) Jacksonville 3220

6825 Evergreen Avenue, P.O. Box 3197

Mailing Address (Please Type)

Florida Registration No. 17417 Date: 5/19/82 Telephone No. (904) 768-2501

(Affix Seal)



¹See 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.

Installation of gas turbine for co-generation of electrical power in the papermill.
Emission control is the use of L.P. gas in place of oil as an alternate fuel on the
turbines.

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

Start of Construction May 1983 Completion of Construction May 1984

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.)

L.P. Gas: \$164,000 (equipment only)

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

Permit #A016-31708 Four Papermill Boilers. Issued November 18, 1980; expires
October 31, 1985.

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 No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr 8760;
 if seasonal, describe: _____

G. If this is a new source or major modification, answer the following questions. (Yes or No) **Does not apply.**

1. Is this source in a non-attainment area for a particular pollutant? _____
 - 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. _____
3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. _____
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? _____
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? _____

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		
Recycled Paper	-	-	17,000	Waste Paper Processing
Water	-	-	57,000	" " "

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

1. Total Process Input Rate (lbs/hr): 74,000#/hr. (including water)

2. Product Weight (lbs/hr): 16,000#/hr.

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	
TSP	1.31	5.74	0.1#/10 ⁶ BTU	7.95	1.31	5.74	5 & 6 *
SO ₂	0.27	1.17	-	-	0.27	1.17	"
CO	2.43	10.66	-	-	2.43	10.66	"
NO ₂	24.45	107.10	-	-	24.45	107.10	"

*Normal operation

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

None

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles ⁵ Size Collected (in microns)	Basis for Efficiency (Sec. V, It ⁵)

¹See Section V, Item 2.

²Reference 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)

³Calculated from operating rate and applicable standard

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

⁵If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas (Turbine & Boiler)	.086	.086	79.56
L.P.G. (Turbine Alt.Fuel)	856 gal./hr.	856 gal./hr.	77.50
#6 Fuel Oil (Boiler Alt.Fuel)	.33	.33	2.06

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

Fuel Analysis: Natural gas - none

Percent Sulfur: L.P.G.- 15 grains/SCF Percent Ash: None

Density: .043#/SCF (natural gas) Typical Percent Nitrogen: 0.51% (natural gas)

Heat Capacity: 1028 BTU/SCF (HHV) 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 10 Est. Maximum 15 Est.

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

None

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

Stack Height: To be determined. ft. Stack Diameter: To be determined. ft.

Gas Flow Rate: 42,320 ACFM Gas Exit Temperature: 200 °F.

Water Vapor Content: - % Velocity: To be determined. FPS

SECTION IV: INCINERATOR INFORMATION

Does not apply.

Type of Waste	Type O (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

- 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
SO ₂	0.8% < Sulfur in fuel or .015% PPM < in exhaust.
NO ₂	150 PPM < in exhaust.

- 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
All	See attachment "A".

- 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
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

(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

A. Company Monitored Data

1. _____ no sites _____ TSP _____ () SO²* _____ Wind spd/dir
Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

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

ATTACHMENT "A"

Emission Calculations

Papermill Co-Generation

Jacksonville, Florida

SIC 2632

I. PRESENT CONDITIONS

Average annual operating hours - 7431.6

(Based on 1980 & 1981 actual)

Boiler heat input (4 boilers) - 98.4×10^6 BTU/hr.

Primary fuel - Natural Gas: HHV 1028 BTU/CF

LHV 922 BTU/CF

Alternate fuel - #6 Fuel Oil: HHV 153,200 BTU/gal.

LHV 146,000 BTU/gal.

Sulfur = 1.5%

Average annual gas curtailment - 427.2 hours

A. Fuel Usage (based on LHV)

Natural Gas: $(98.4 \times 10^6 \text{ BTU/hr.})(7431.6 - 427.2 \text{ hr.}) \left(\frac{1}{922 \text{ BTU/CF}} \right) =$

$747.5 \times 10^6 \text{ CF/yr.}$

#6 Fuel Oil: $(98.4 \times 10^6 \text{ BTU/hr.})(427.2 \text{ hr.}) \left(\frac{1}{146,000 \text{ BTU/gal.}} \right) =$

$287.9 \times 10^3 \text{ gal./yr.}$

B. Emission Rates (using AP-42 Factors)

$$\begin{aligned} \text{TSP: } & (747.5 \times 10^6 \text{ CF/yr.})(15\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(18\#/10^3 \text{ gal.}) \\ & = 16395\#/yr. \text{ or } \underline{8.20 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{SO}_2: & (747.5 \times 10^6 \text{ CF/yr.})(0.6\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.}) [(157)(1.5\%)] \\ & \text{\#/10}^3 \text{ gal.}) = 68,249\#/yr. \text{ or } \underline{34.12 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{CO: } & (747.5 \times 10^6 \text{ CF/yr.})(17\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(5\#/10^3 \text{ gal.}) \\ & = 14,147\#/yr. \text{ or } \underline{7.07 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{NO}_2: & (747.5 \times 10^6 \text{ CF/yr.})(230\#/10^6 \text{ CF}) + (287.9 \times 10^3 \text{ gal./yr.})(60\#/10^3 \text{ gal.}) \\ & = 189,199\#/yr. \text{ or } \underline{94.60 \text{ TPY}} \end{aligned}$$

II. PROPOSED CONDITIONS

Turbine fuel input - 77.5×10^6 BTU/hr. (Total 2 turbines)

Boiler fuel input - 2.06×10^6 BTU/hr.

Primary fuel (turbines & boiler) - Natural Gas

Alternate fuel (turbine) - L.P.G.

Alternate fuel (boiler) - #6 Fuel Oil

Fuel heating values (LHV): Natural Gas - 922 BTU/CF

#6 Fuel Oil - 146,000 BTU/gal.

L.P.G. - 90,500 BTU/gal.

Turbines

Natural Gas 77.5×10^6 BTU/hr. \div 922 BTU/CF = $.084 \times 10^6$ CF/hr.

L.P.G. 77.5×10^6 BTU/hr. \div 90,500 BTU/gal. = $.856 \times 10^3$ gal./hr.

Boiler

Natural Gas 2.06×10^6 BTU/hr. \div 922 BTU/CF = $.002 \times 10^6$ CF/hr.

#6 Fuel Oil 2.06×10^6 BTU/hr. \div 146,000 = $.014 \times 10^3$ gal./hr.

Operating Hours

Primary Fuel - 8332.8

Alternate Fuel - 427.2

8760.0

Emission Rates (AP-42 Factors, except as noted)

TSP:

$$\begin{aligned} \text{Turbines } & (.084 \times 10^6 \text{ CF/hr.}) (15\#/10^6 \text{ CF}) (8332.8 \text{ hr.}) + \\ & (.856 \times 10^3 \text{ gal./hr.}) (1.7\#/10^3 \text{ gal.}) (427.2 \text{ hr.}) = 11,121 \text{ \#/yr.} \\ & \text{or } \underline{5.56 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{Boiler } & (.002 \times 10^6 \text{ CF/hr.}) (15\#/10^6 \text{ CF}) (8332.8 \text{ hr.}) + \\ & (.014 \times 10^3 \text{ gal./hr.}) (18\#/10^3 \text{ gal.}) (427.2 \text{ hr.}) = 358 \text{ \#/hr.} \\ & \text{or } \underline{0.18 \text{ TPY}} \end{aligned}$$

SO₂

$$\begin{aligned} \text{Turbines } & (.084 \times 10^6 \text{ CF/yr.}) (0.6\#/10^6 \text{ CF}) (8332.8) + \\ & (.856 \times 10^3 \text{ gal./hr.}) (1.35\#/10^3 \text{ gal.}) (427.2 \text{ hr.}) = 914\text{\#/hr.} \\ & \text{or } \underline{0.46 \text{ TPY}} \end{aligned}$$

$$\begin{aligned} \text{Boiler } & (.002 \times 10^6 \text{ CF/yr}) (0.6\#/10^6 \text{ CF}) (8332.8) + \\ & (.014 \times 10^3 \text{ gal/hr}) (157(1.5\%)\#/10^3 \text{ gal}) (427.2 \text{ hr}) = 1418 \text{ \#/yr.} \\ & \text{or } \underline{0.71 \text{ TPY}} \end{aligned}$$

CO

Based on turbine manufacturer's data, CO emission rate is

2.4#/hr. (2 turbines) for gaseous fuels

$$(2.4\text{\#/hr}) (8760 \text{ hr./yr}) = 21,024\text{\#/yr.} \quad \text{or } \underline{10.5 \text{ TPY}}$$

$$\begin{aligned} \text{Boiler } (.002 \times 10^6 \text{ CF/hr}) (17\#/10^6 \text{ CF}) (8332.8 \text{ hr.}) &+ \\ (.014 \times 10^3 \text{ gal/hr}) (5\#/10^3 \text{ gal}) (427.2 \text{ hr.}) &= 313\#/\text{yr. or } \underline{0.16 \text{ TPY}} \end{aligned}$$

NO₂

Based on turbine manufacturers' data, NO₂ emission rate is 24#/hr. (2 turbines)

$$((24\#/\text{hr}) (8760 \text{ hr./yr}) = 210,240\#/\text{yr. or } \underline{105 \text{ TPY}}$$

$$\begin{aligned} \text{Boiler } (.002 \times 10^6 \text{ CF/hr}) (230\#/10^6 \text{ CF}) (8332.8) &+ \\ (.014 \times 10^3 \text{ gal/hr}) (60\#/10^3 \text{ gal}) (427.2 \text{ hr}) &= 4191\#/\text{yr. or } \underline{2.10 \text{ TPY}} \end{aligned}$$

EMISSIONS SUMMARY

- Tons per Year -

	<u>TSP</u>	<u>SO₂</u>	<u>CO</u>	<u>NO₂</u>
Present Conditions,				
Boilers	8.20	34.12	7.07	94.6
Proposed Conditions,				
Turbines	5.56	0.46	10.50	105.00
Boiler	<u>0.18</u>	<u>0.71</u>	<u>0.16</u>	<u>2.10</u>
	5.74	1.17	10.66	107.10
Net Increase of Decrease	-2.46	-32.95	+3.59	+12.5

ATTACHMENT "B"

Calculation for SO₂ & NO₂

Concentrations in Exhaust Stack from Turbine Operation

Papermill Co-Generation -
Jacksonville, Florida

Exhaust Conditions - 42,320 ACFM at 200°F

NO₂ - 24.45#/Hr.

SO₂ - 0.27#/Hr.

Molecular Wt. NO₂ - 46

" " SO₂ - 64

$$42,320 \text{ ACFM} \times \frac{530}{660} = 33,984 \text{ SCFM}$$

460
200

Concentration
NO₂:

$$\frac{24.45 \text{ \#/hr.} \times (10^6 \text{ \# - Moles. Air})}{46 \text{ \#-NO}_2 \text{ \#-Mole. NO}_2} \times 33,984 \frac{\text{SCF}}{\text{Min.}} \times 60 \frac{\text{Min.}}{\text{Hr.}} \times \frac{1.0 \text{ \# Mole. Air}}{378.5 \text{ SCF}} = \underline{\underline{98.66 \text{ PPM}}}$$

Concentration
SO₂:

$$\frac{0.27 \text{ \#/Hr.} \times (10^6 \text{ \# - Moles. Air})}{64 \text{ \# SO}_2 \text{ \# Mole. SO}_2} \times 33,984 \frac{\text{SCF}}{\text{Min.}} \times 60 \frac{\text{Min.}}{\text{Hr.}} \times \frac{1.0 \text{ \# Mole. Air}}{378.5 \text{ SCF}} = \underline{\underline{0.78 \text{ PPM}}}$$

New Source Performance Standards: NO₂ - 150 PPM
SO₂ - 0.015% by volume

ATTACHMENT "C"

PERMIT NO.: A016-31708
APPLICANT: U.S. Gypsum Company
Source: Four Paper Mill Steam Boilers

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

- a. Permit Application
- b. Plot Plans
- c. Additional Information

2. Testing of emissions must be accomplished at ± 10% of the rate stated in the permit.

3. Test the emissions for the following pollutant(s) at intervals indicated from the date of September 1, 1980 and submit a copy of the test report to the Jacksonville Bio-Environmental Services Division and a summary to this office within 15 days after completion of the testing: *

Visible Emissions: Nat'l Gas - upon request
No. 6 Fuel Oil - (if used) to be submitted by 10th day in use.
*(Notify this office 2 weeks prior to testing)

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

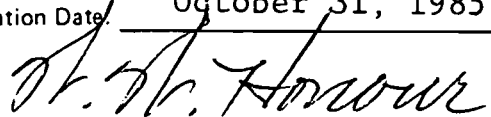
5. Any revision(s) to a permit (and application) must be submitted and approved prior to implementation.

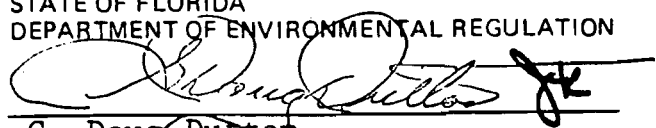
6. The maximum allowable emission rate for each pollutant is as follows:

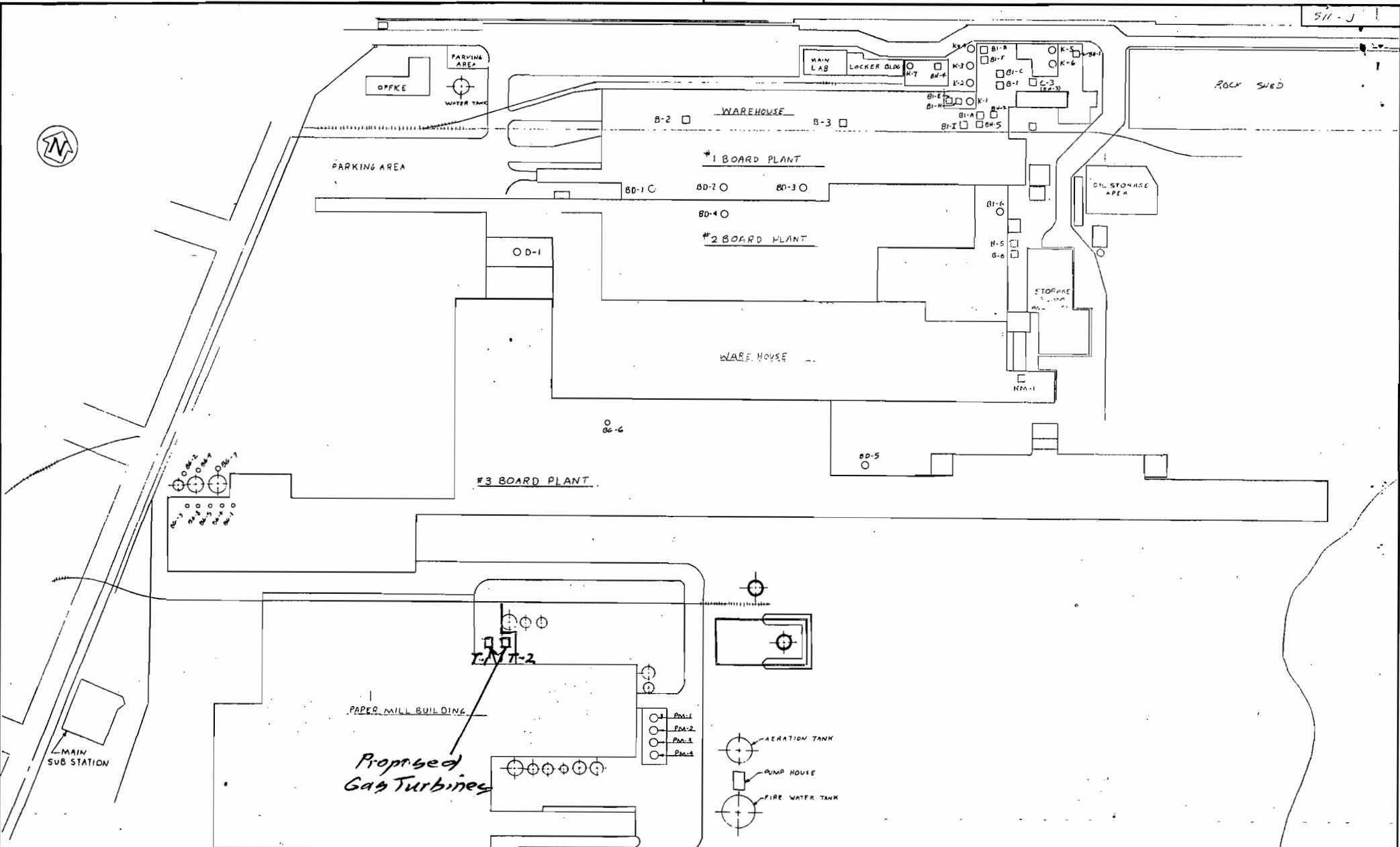
Pollutant	Emission Rate	Maximum Allowable Emission
Particulates	17-2.05(6)E(2) 0.1 lb/MTtu	9.84 lb/hr, 41 T/yr
SO ₂	17-2.05(6)E(2) 1.5% S Fule (1.65 lb/hr)	162.4 lb/hr, 675.7 T/yr
Visible Emissions	17-2.05(6)E(2)	20%, 40% - 2 min/hr maximum

Expiration Date October 31, 1985

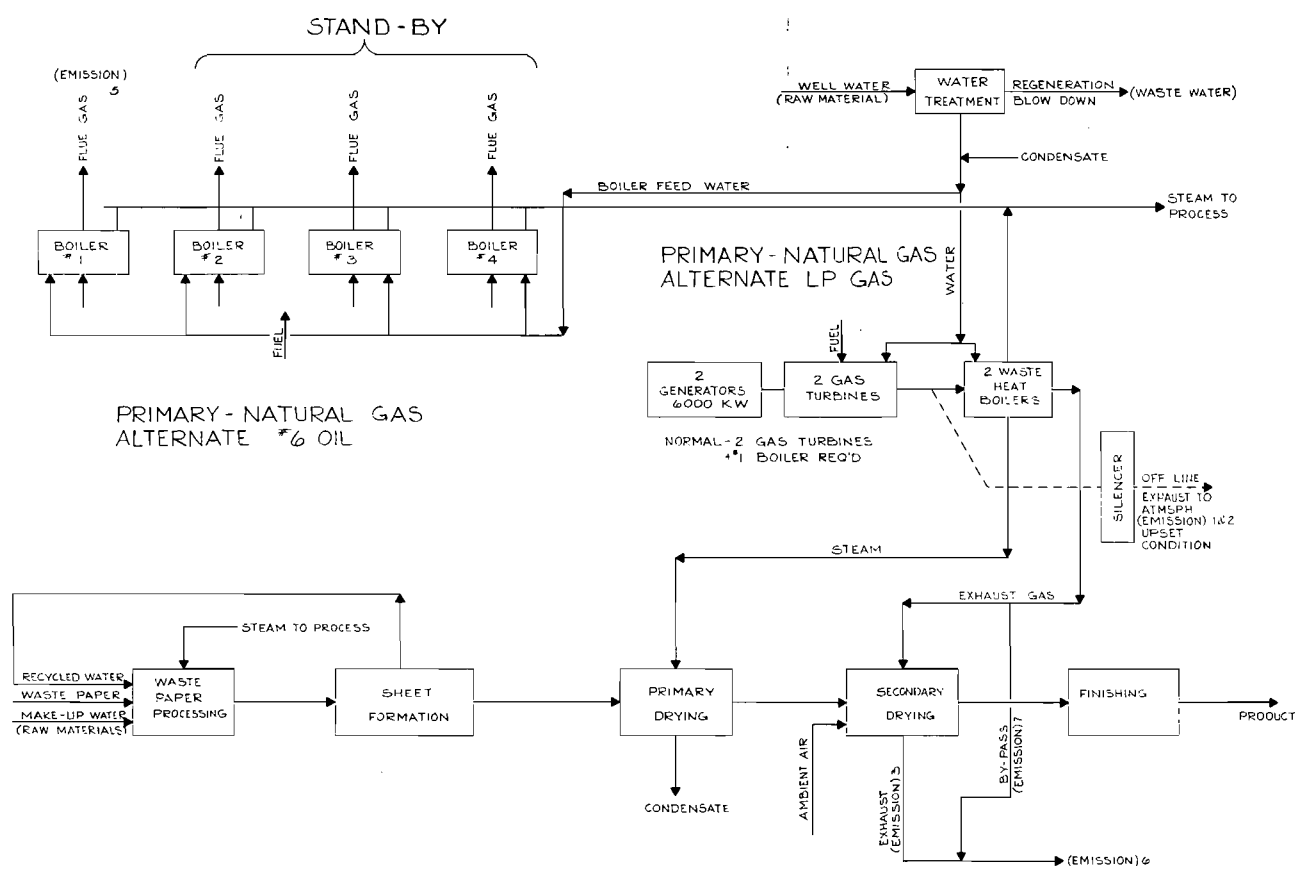
Issued this 18th day of November, 1980


Walter W. Honour, Division Chief
Bio-Environmental Services
City of Jacksonville

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

G. Doug Dutton
Sub-District Manager



REVISIONS	DATE	BY	DESCRIPTION	APPROVED BY	DATE	SCALE	UNITED STATES GYPSUM CO. CHICAGO, ILL.	PROJECT NUMBER
							JACKSONVILLE, FLA.	511-J
							AIR POLLUTION SOURCES	REV. ○



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									CO-GENERATION FLOW DIAGRAM	REV. ○