

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Thomas A. Grace, Mgr.
Safety & Regulatory Affairs
Lake Cogen, LTD
One Upper Pond Rd
Parsippany, NJ
07054

4a. Article Number

P 265 659 238

4b. Service Type

- ☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

7-7-97

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)

[Signature]

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

PS Form 3811, December 1994

Domestic Return Receipt

Thank you for using Return Receipt Service.

P 265 659 238

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to	
Thomas Grace	
Street & Number	
Lake Cogen	
Post Office, State, & ZIP Code	
Parsippany, NJ	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	
0694801-003-AC 7-3-97	
PSD-FI-176	

PS Form 3800, April 1995

000398

DATE 06/19/97 CHECK NO. 000398 VEND NO. FDEP2

INVOICE NO.	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER NO.	NET AMOUNT
053197	05/31/97	250.00	0.00	VOUCHER 273686	250.00
TOTALS		250.00	0.00		250.00

000398

DATE 06/19/97 CHECK NO. 000398 VEND NO. FDEP2

INVOICE NO.	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER NO.	NET AMOUNT
053197	05/31/97	250.00	0.00	VOUCHER 273686	250.00
TOTALS		250.00	0.00		250.00

Best Available Copy

FedEx USA Airbill

Tracking
Number

2876100780

Date 6/19/97 Sender's FedEx Account Number 1095-2101-9

Sender's Name Tom Grace Phone (201)-263-6950

Company GPU INTERNATIONAL INC Dept./Floor/Suite/Room

Address 1 UPPER POND RD BLDG E

PARSIPPANY State NJ Zip 07054

Your Internal Billing Reference Information 123

Recipient's Name Florida Dep. of Env. Protection Phone ()

Company Florida Dep. of Env. Protection Dept./Floor/Suite/Room

Address 2600 Blair Stone Road

(To avoid at FedEx location, print FedEx address here)

City Tallahassee State FL Zip 32339-2405

For HOLD at FedEx Location check here

1 ☐ Hold Weekday (Not available with FedEx First Overnight) 3 ☐ Hold Saturday (Not available at all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)

For Saturday Delivery check here

3 ☐ (Extra Charge. Not available to all locations) (Not available with FedEx First Overnight or FedEx Standard Overnight)



FedEx Retrieval Code
731 1000 41350243 629: N

2a Express Package Service Packages under 150 lbs.
1 ☐ FedEx Priority Overnight (Next business morning) 5 ☒ FedEx Standard Overnight (Next business afternoon) 3 ☐ FedEx International Economy (Success)

6 ☐ NEW FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply) *FedEx Letter R. Int'l. only. Day 10: pac. 45 lbs.

4b Express Freight Service Packages over 150 lbs.
7 ☐ FedEx Overnight Freight (Next business day service for any distance) 8 ☐ FedEx 2Day Freight (Second business day service for any distance) 83 ☐ FedEx Express Saver (Up to 3 business days based upon service)

(Call for delivery schedule. See back for detailed descriptions of freight products)

5 Packaging 6 ☒ FedEx Letter (Unpackaged value limit \$500) 2 ☐ FedEx Pak 3 ☐ FedEx Box 4 ☐ FedEx Tube

6 Special Handling
Does this shipment contain dangerous goods? 4 ☐ Yes (As per its label) ☒ No

6 ☐ Dry Ice (Dry ice, 8, UN 1845 III (Dangerous Goods Shipper's Declaration not required) kg 904 CA ☐ Cargo A.

7 Payment
Bill to: 1 ☒ Sender (Account no. in Section 1 will be billed) 2 ☐ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Obtain Re. FedEx Ac.

(Enter FedEx account no. or Credit Card no. below)

FedEx Account No. _____ Exp. Date _____
Credit Card No. _____

Total Packages 1 Total Weight 1

*When declaring a value higher than \$100 per shipment, you pay an additional charge. See SERVICE CONDITIONS, DECLARED VALUE AND LIMIT OF LIABILITY section for further information.

8 Release Signature

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

272

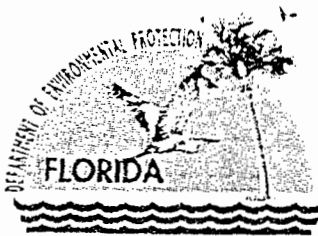
☐ Check here if package was dropped off

Rev. Date 6/96
PART #147956

GBFE 10/96

PERMIT

DENIAL



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

April 16, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Services
Lake Cogen, Ltd.
c/o NCP Lake Power, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Notice of Permit Denial
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

Enclosed is one copy of the Department's "NOTICE OF PERMIT DENIAL".

The Department will take no further action on this project and maintains that the facility must continue to comply with the CO emission limitations currently in place. Should you wish to pursue any project of this nature in the future, it must be submitted to the Department as a new application.

If you have any questions, please call Michael P. Halpin, P.E. at 850/921-9519.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources Management

CHF/mph

Enclosures

AAL/mph

cc: K. F. Kosky, Golder Associates
Len Kozlov, DEP CD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

In the Matter of an
Application for Permit by:

Mr. Thomas A. Grace, Director -- Environmental Services
NCP Lake Power, Inc.
One Upper Pond Road
Parsippany, NJ 07054

DEP File No. 0694801-004-AC, PSD-FL-176A
Lake Cogen, Ltd
Lake County

NOTICE OF PERMIT DENIAL

The applicant, Lake Cogen, Ltd., facility located in Umatilla, Florida, applied on April 21, 2000 to the Department of Environmental Protection for a permit to modify the CO emission limitation.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit modification is required for the proposed work.

The Department hereby denies the permit for the following reason:

The applicant failed to respond to the Department's requests for additional information.

A person whose substantial interests are affected by the Department's permit denial may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this Notice of Permit Denial. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of receipt of this Notice of Permit Denial. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the

Notice of Permit Denial

Lake Cogen, Ltd.

April 16, 2001

Page 2 of 2

presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

This Notice constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition, which conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this Notice shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Howard L. Rhodes, Director
Division of Air Resources
Management

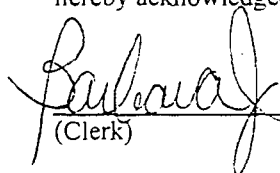
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Permit Denial and all copies were sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 4/17/01 to the person(s) listed:

Mr. Thomas A. Grace *
Mr. K.F. Kosky, P.E.
Mr. Len Kozlov, DEP - CD
Mr. Gregg Worley, EPA
Mr. John Bunyak, NPS

Clerk Stamp

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

 Friday 4/17/01
(Clerk) (Date)

LAKE COGEN, LTD.

NCP LAKE POWER, INC., GENERAL PARTNER

April 4, 2001

• One Upper Pond Road • Parsippany, NJ 07054
Tel (973) 263-6950 • Fax (973) 263-6977

Mr. Al Linero, P.E.
Administrator - New Source Review Section
Florida Department of Environmental Protection
Marjory Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

RECEIVED

APR 10 2001

BUREAU OF AIR REGULATION

RE: Lake Cogeneration; DEP File No. 0694801-004-AC (PSD-FL-176A);
Modification of CO Emission Limitation - Request for additional information

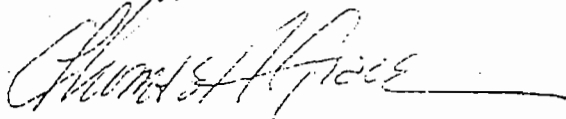
Dear Mr. Linero:

This is in response to your recent inquiry concerning the status of the referenced application. The project has decided not to proceed further with this modification request at the present time. Based upon the facts that the additional information requested by the Department was not forwarded and that the project has not taken further action to promote the modification request, we also understand that the Department will deny the initial application for the modification request that was filed April 21, 2000. Therefore, the project will continue to maintain the CO emission limits as currently addressed within its Title V Operating Permit.

I do not know if the information has cycled down into your section yet, but in December 2000, GPU International sold its partnership share of the Lake Cogen project to Aquila. Aquila has taken over as the Managing Partner for the project. With the transfer, I also went with the project to join the Aquila team and continue to work with the project. We provided notice to the Department of the change in early January 2001.

Thank-you for the help provided in trying to get this modification through. Please convey our thanks to Mr. Halprin also.

Sincerely,



Thomas A. Grace, CHMM
Director - Environmental Services

Cc: J. LaBauve
L. Rajter
C. Crowder
J. Miller


File: 273-2010.4


L01031lake

Memorandum

Florida Department of Environmental Protection

TO: Howard L. Rhodes

THRU: C. H. Fancy 
A. A. Linero

FROM: Michael P. Halpin 

DATE: April 16, 2001

SUBJECT: Lake Cogen PSD Permit modification

Attached for approval and signature is a "NOTICE OF PERMIT DENIAL" for the subject facility:

Lake Cogen requested this modification nearly a year ago, on April 21, 2000. A "Request for Additional Information" was promptly sent to the applicant on April 26, 2000. After repeated attempts, the applicant failed to respond to the Department's request. On February 23, 2001 a "Final Request for Additional Information" was sent to the applicant, indicating the Department's intent to deny the application if a response was not received within 30 days. On April 4, 2001 the applicant responded indicating that they did not intend to further pursue the modification at the present time, and stated that they understood that the application would be denied.

I recommend your approval and signature.

Attachments

/mph

LAKE COGEN, LTD.

NCP LAKE POWER, INC., GENERAL PARTNER

April 4, 2001

Mr. Al Linero, P.E.
Administrator -- New Source Review Section
Florida Department of Environmental Protection
Marjory Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

One Upper Pond Road • Parsippany, NJ 07054
Tel (973) 263-6950 • Fax (973) 263-6977

RECEIVED

APR 10 2001

BUREAU OF AIR REGULATION

RE: Lake Cogeneration; DEP File No. 0694801-004-AC (PSD-FL-176A);
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Sincerely,

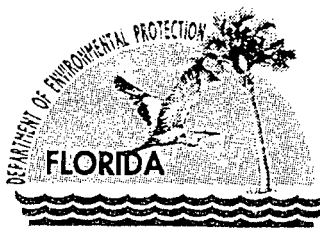


Thomas A. Grace, CHMM
Director – Environmental Services

Cc: J. LaBauve
L. Rajter
C. Crowder
J. Miller

File: 273-2010.4

L01031lake



Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

February 23, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Health and Safety
c/o GPU International, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Final Request for Additional Information
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

On April 21, 2000 the Department received your application for a modification to the air construction permit for Lake Cogeneration Limited. The application was incomplete. On April 26, 2000, the Department requested you to submit additional information that would allow continued processing of your application. To date, we have not received the requested additional information. Rule 62-4.055(1) of the Florida Administrative Code requires the following:

"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application."

It has been more than ninety (90) days since our initial request for additional information. The nature of the requested information is such that a diligent effort would have yielded it by now and would certainly yield it within the next thirty (30) days. We are providing you an additional thirty (30) days from the day this letter is received to provide the requested additional information (copy attached). If you fail to respond to this request before this deadline, the Department will deny your application.

If you have any questions regarding this matter, please call me at 850/921-9523 or Michael P. Halpin at 850-921-9519.

Sincerely,

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/mph

cc: K. F. Kosky, Golder Associates
Len Kozlov, DEP CD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

April 26, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Health and Safety
c/o GPU International, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Request for Additional Information
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

On April 21, 2000 the Department received your application for a modification to the air construction permit for Lake Cogeneration Limited. This request is to change the CO limit (from what is represented in the table below) to a facility-wide limit of 42 ppmvd (at 15% O₂) with an annual CO emissions cap of 350 TPY. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

Lbs / Hr @ 59°F	Lbs / Hr @ 51°F	Basis	Operating Mode
54.6	56.0	28 ppmvd	CT firing Natural Gas
33.0	34.5	18 ppmvd	CT firing #2 Fuel Oil
36.0	36.0	0.2 lb/MMBtu	DB firing Natural Gas
90.6	92.0		CT + DB firing Natural Gas
TPY = 350.3			

1. Please update the 1991 evaluation of a CO catalyst installation for each unit. That evaluation resulted in a removal cost of \$2700 per ton, which seems high, based upon a recent EPA memorandum dated December 30, 1999.
2. Without the following, the Department is unwilling to accept the statistical analysis provided with the application. The following questions arise as a result of the statistical data and analysis provided:
 - A. 17 data points appear to be represented as the total population for each chart, apparently representing tests from 4 or more sites. The number of data points appears inadequate to draw conclusions, or to ensure that the data is even normally distributed. Please consider using at least 30 (recent) data points and performing a test to ensure that the data is normally distributed at a 98% confidence level. Data should be quality checked (i.e. the test method as well as other controllable factors should be as similar as practical) and data which has special or assignable causes, as well as statistical outliers should be eliminated.
 - B. Unless it can be statistically proven at a high confidence level that the data sets at each site are from the same population (and therefore can be intermingled), all data should be from only the Lake Cogen. site. This is necessary to eliminate any site-to-site variability, which may be the result of differences in permit limits, operation/maintenance practices, fuel type usage, combustor tuning, etc. In the event that the data sets can be statistically proven to represent the same population, please provide that analysis.

Mr. Thomas A. Grace
Request for Additional Information
Page 2 of 2
April 26, 1999

3. Please provide the most recent two years worth of historical CO emissions. If this data is not considered to be representative, provide CO emissions for every year of post-construction operation, indicating which years are deemed to be representative as well as the accompanying rationale. The Department intends to review past actual operation with proposed future operation as part of this action.
4. Please indicate whether any other (additional) means are available to obtain real offsetting reductions in CO emissions from the facility as a whole.
5. The Department will likely require a CO CEMS unless the permittee can adequately show that it is impractical for this installation.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Material changes to the application should also be accompanied by a new certification statement by the authorized representative or responsible official. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call Mike Halpin at 850/921-9530.

Sincerely,

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/jk

cc: Gregg Worley, EPA
John Bunyak, NPS
Len Kozlov, DEP CD
Ken Kosky, Golder Associates, Inc.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

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

- ☐ Addressee's Address
- ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Thomas A. Grace, Mgr.
 Safety & Regulatory Affairs
 Lake Cogen, LTD
 One Upper Pond Rd
 Parsippany, NJ 07054

4a. Article Number
 P 265 659 238

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

7. Date of Delivery
 7-7-97

5. Received By: (Print Name)

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

6. Signature: (Addressee or Agent)

[Signature]

Domestic Return Receipt

PS Form 3811, December 1994

Thank you for using Return Receipt Service.

P 265 659 238

US Postal Service
Receipt for Certified Mail
 No Insurance Coverage Provided.
 Do not use for International Mail (See reverse)

Sent to		Thomas Grace
Street & Number		Lake Cogen
Post Office, State, & ZIP Code		Parsippany, NJ
Postage	\$	
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees	\$	
Postmark or Date 0694801-003-AC 7-3-97 PSD-FI-176		

PS Form 3800, April 1995



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 3, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Manager, Safety and Regulatory Affairs
Lake Cogen, LTD.
One Upper Pond Road
Parsippany, NJ 07054

Re: Permit Amendment No. 0694801-003-AC, PSD-FL-176
Lake County Cogen-Combined Cycle Gas Turbine and Steam Generator

Dear Mr. Grace:

The Department is in receipt of your letter dated June 17, 1997 requesting a change to your air construction (PSD) permit. The Department hereby amends the Specific Condition 13 in the subject PSD permit as indicated below. You will need to submit a separate application to our Central District office in order to update your air operating permit and Title V submittal.

Specific Condition No. 13

~~During performance tests,~~ To determine initial compliance with the NSPS standard for NO_x allowable ~~NO_x standard,~~ the measured NO_x emission at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_{x\text{ obs}}) \left(\frac{P_{\text{ref}}}{P_{\text{obs}}} \right)^{0.5} e^{19(H_{\text{obs}} - 0.00633)} \left(\frac{288^\circ K}{T_{\text{amb}}} \right)^{1.53}$$

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.

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

Printed on recycled paper.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 3, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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Manager, Safety and Regulatory Affairs
Lake Cogen, LTD.
One Upper Pond Road
Parsippany, NJ 07054

Re: Permit Amendment No. 0694801-003-AC, PSD-FL-176
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Specific Condition No. 13

~~During performance tests, to~~ To determine initial compliance with the NSPS standard for NO_x allowable ~~NO_x standard~~, the measured NO_x emission at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_{x,obs}) \left(\frac{P_{ref}}{P_{obs}} \right)^{0.5} e^{19(H_{obs} - 0.00633)} \left(\frac{288^\circ K}{T_{amb}} \right)^{1.53}$$

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.

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Hobs = Specific humidity of ambient air at test.

e = Transcendental constant (2.718).

T_{amb} = Temperature of ambient air at test (°K).

Subsequent annual compliance tests conducted to establish compliance with NOx limits that are more stringent than the NSPS standard [Table 1] shall not require an ISO correction or testing at four load points; rather, the testing shall be done at capacity, as defined above. However, when testing shows that NOx emissions exceed the standard when operating at capacity, the company shall recalibrate the NOx emission control system using emission testing at four loads as required in Subpart GG.

A person whose substantial interests are affected by this permit amendment may petition for an administrative hearing in accordance with Sections 120.569 and 120.57 F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, telephone: 850/488-9730, fax: 850/487-4938. Petitions must be filed within fourteen days of receipt of this permit amendment. A petitioner must mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-5.207 of the Florida Administrative Code.

A petition must contain the following information: (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the Department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of the facts that the petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement identifying the rules or statutes that the petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take with respect to the action or proposed action.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this permit amendment. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A person whose substantial interests are affected by the Department's proposed permitting decision, may elect to pursue mediation by asking all parties to the proceeding to agree to such mediation and by filing with the Department a request for mediation and the written agreement of all such parties to mediate the dispute. The request and agreement must be filed in (received by) the Office of General Counsel of the

Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

A request for mediation must contain the following information: (a) The name, address, and telephone number of the person requesting mediation and that person's representative, if any; (b) A statement of the preliminary agency action; (c) A statement of the relief sought; and (d) Either an explanation of how the requester's substantial interests will be affected by the action or proposed action addressed in this notice of intent or a statement clearly identifying the petition for hearing that the requester has already filed, and incorporating it by reference.

The agreement to mediate must include the following: (a) The names, addresses, and telephone numbers of any persons who may attend the mediation; (b) The name, address, and telephone number of the mediator selected by the parties, or a provision for selecting a mediator within a specified time; (c) The agreed allocation of the costs and fees associated with the mediation; (d) The agreement of the parties on the confidentiality of discussions and documents introduced during mediation; (e) The date, time, and place of the first mediation session, or a deadline for holding the first session, if no mediator has yet been chosen; (f) The name of each party's representative who shall have authority to settle or recommend settlement; and (g) The signatures of all parties or their authorized representatives.

As provided in Section 120.573 F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57 F.S. for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons whose substantial interests will be affected by such modified final decision of the Department have a right to petition for a hearing only in accordance with the requirements for such petitions set forth above. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under Sections 120.569 and 120.57 F.S. remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000, by the same deadline as set forth above for the filing of a petition.

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The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

This permit amendment is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 62-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit amendment will not be effective until further order of the Department.

When the Order (Permit Amendment) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Sincerely,

A handwritten signature in cursive script, appearing to read "Howard L. Rhodes".

Howard L. Rhodes, Director
Division of Air Resources
Management

Mr. Thomas A. Grace

Page 5

July 3, 1997

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this AMENDMENT was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on

7-3-97 to the person(s) listed:

Mr. Thomas A Grace, Lake Cogen, LTD. *

Mr. Len Kozlov, CD

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52(7), Florida
Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.

Leri John
(Clerk)

7-3-97
(Date)

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The undersigned duly designated deputy agency clerk hereby certifies that this AMENDMENT was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7-3-97 to the person(s) listed:

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on this date, pursuant to §120.52(7), Florida
Statutes, with the designated Department Clerk,
receipt of which is hereby acknowledged.

Lini John 7-3-97
(Clerk) (Date)

Memorandum

Florida Department of Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy *ccy for CHR*
Al Linero *adlin 7/2*

FROM: Marty Costello *MC*

DATE: July 2, 1997

SUBJECT: Lake Cogen, LTD. PSD-FL-176
FINAL Permit Amendment No. 0694801-003-AC

KIM

Attached for approval and signature is a letter that will amend the above referenced permit to clarify that the ISO correction factor and testing at four loads only applies to demonstration of compliance with the NSPS standard for NO_x. This change has been made in several cases and is based on Guidance Document No. DARM-EM-05 entitled Guidance On Rate of Operation During Compliance Testing For Combustion Turbines, dated 11/22/95.

I recommend your approval and signature.

FAX

Date 07/3/97

Number of pages including cover sheet 6

TO: Mr. Thomas A. Grace

Phone (201) 263-6913

Fax Phone (201) 263-6848

FROM: New Source Review
Section
Florida DEP
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Phone (850) 488-1344

Fax Phone (850) 922-6979

CC:

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please Comment

Mr. Grace,

Following is the modification to your air construction permit for 0694801-003-AC, PSD-FL-176.
Please call me if there is any transmission problem with this fax at the above phone number.

Heather Hinst

000398

DATE 06/19/97 CHECK NO. 000398 VEND NO. FDEP2

INVOICE NO.	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER NO.	NET AMOUNT
053197	05/31/97	250.00	0.00	VOUCHER 273686	250.00
TOTALS		250.00	0.00		250.00

000398

DATE 06/19/97 CHECK NO. 000398 VEND NO. FDEP2

INVOICE NO.	INVOICE DATE	AMOUNT	DISCOUNT	VOUCHER NO.	NET AMOUNT
053197	05/31/97	250.00	0.00	VOUCHER 273686	250.00
TOTALS		250.00	0.00		250.00

LAKE COGEN, LTD.
NCP LAKE POWER, INC., GENERAL PARTNER

June 17, 1997

Mr. Al Linero
Florida Department of Environmental Protection
Bureau of Air Quality
2600 Blair Stone Road
Mail Station 5505
Tallahassee, Florida 32399-2400

One Upper Pond Road
Parsippany, NJ 07054
Telephone (201) 263-6950
Facsimile (201) 263-6977

RECEIVED

JUN 25 1997

**BUREAU OF
AIR REGULATION**

Dear Mr. Linero:

AIRS I.D.# 0694801-003-AC

RE: Lake Cogen Limited, Construction Permit No. AC 35-196459 and Permit to Operate No. AO 35-248140 - Minor Permit Modification Request

As the Authorized Representative for the Lake Cogen facility, I am submitting this letter requesting several minor changes to the facility's Construction Permit, Permit to Operate, and Title V Operating Permit application. This letter is the result of several conversations and meetings I have had recently with our Plant Manager, Mr. Buck Oliver, Mr. Anatoliy Sobolevskiy of Central Region and Mr. Martin Costello of your staff. The changes are basically administrative in nature and reflect issues that have been previously addressed in the Department's Guidance Document DARM-EM-05, "Guidance on Rate of Combustion During Compliance Testing for Combustion Turbines".

The issues that we want to address include the following:

1. Per Operating Permit Specific Condition for Compliance Determination - No. 3:
 - a. Delete reference to the operation requirements for firing on natural gas or fuel oil under ISO conditions, as shown in "mark-up". This is no longer necessary.
2. Per Operating Permit Specific Condition for Compliance Determination - No. 10:
 - a. Delete language that requires source testing at either 30, 50, 75 and 100 % of peak load, or at four points in the normal operating range of the gas turbine, and instead, only be required to comply with special condition 13, in which testing is only required within the 90 to 100% rated capacity range of the units.
 - b. Delete language that requires the ISO correction adjustment. This is no longer necessary.
 - c. Delete the requirement to perform source testing for VOCs. Per condition, this is only required if the CO emission limit is not met during the annual source test. Consequently, VOC emissions must be reviewed only as a

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secondary test, if and when CO emissions are found to be greater than allowed, and not as an annual requirement..

d. Request a short term variance from the Department with regard to the July 15, 1997 date for annual compliance testing, until the changes to the permit requested in this letter are finalized.

3. Per Operating Permit Specific Condition for Compliance Determination - No. 11, and Construction Permit Specific Condition for Compliance Determination - No. 13:

a. Condition refers to adjustment of Nox emissions to ISO conditions and includes the calculation for doing such. This entire condition is requested to be deleted. This condition was met with the initial source test and is no longer necessary for the facility.

4. Per Operating Permit Specific Condition for Compliance Determination - No. 12:

a. Delete language requiring the permittee to have a pre-test meeting with the Department prior to conducting the source test.. We agree with the Department that having the pre-test meetings are a good practice and beneficial, but these are not based upon a regulatory requirement and therefore should not be included as a special condition under the operating conditions for the permit.

5. Per Operating Permit Specific Condition for Compliance Determination - Table 1A:

a. Delete language from the Allowable Emissions Table that concerns limits based upon ISO conditions. The Table would then have lb/hr and TPY limits solely based upon one maximum allowable limit standard.

The Lake Cogen facility successfully completed its initial source testing in which testing at the four load points and corrected to ISO conditions for comparison with the NSPS allowable was performed. This was done in 1994. Per paragraph four of the Departments Guidance Document DARM-EM-05, "Guidance on Rate of Operation During Compliance Testing for Combustion Turbines", subsequent annual compliance testing conducted to establish compliance with Nox limits at the Lake Cogen facility should no longer require ISO correction, or testing at the four load points.

As indicated in 1.d. above, we would like to have the Department's approval to delay the annual source test pending resolution of these issues. As instructed by Mr. Costello, by way of this letter, I will go back to Central District and request a postponement of the source test for three months, from July 15, 1997 to October 15, 1997. If additional time is required to amend the permits, an additional postponement period will be requested.

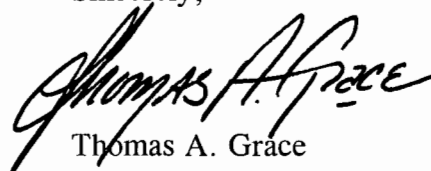
A set of "marked up" permits, a copy of guidance document DARM-EM-05, and a review fee check for \$250.00 are included with this submittal. Due to the need to get on with the annual source test for the Lake Cogen facility I would respectfully request that the Department expedite these modifications in as expedient a manner as possible.

In lieu of amending the permits at this time, an alternative that allows Lake Cogen to proceed with the annual source test in a timely manner would be a letter from the Department that either:

1. provides a one-time approval to conduct source testing at capacity and without correcting to ISO conditions, while the Department takes the time necessary to review and amend the facility permits; or,
2. provides approval to conduct annual source tests at capacity and without correcting to ISO conditions until such time that the facility's Title V operating permit incorporates these changes and is issued.

If you have any questions or require additional information, please feel free to contact me at any time. My telephone number is (201) 263-6913.

Sincerely,



Thomas A. Grace

Manager, Safety and
Regulatory Affairs

w/attachments

cc: J. McTear
B. Oliver
A. Sobolevskiy - FLDEP Central Region
C. Shine - FLDEP Central Region
M. Costello - FLDEP Tallahassee office
File: 273-2010.4



Best Available Copy

Department of Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL
P 248 041 685

Nations Bank of Florida, National Association
600 Peachtree Street, NE
Suite 900
Atlanta, Georgia 30308

Attention: L. Collins Proctor, Trust Officer

Lake County - AP
Lake Cogen Facility
Combined Cycle Gas Turbine Cogeneration Facility

Dear Mr. Proctor:

Enclosed is a revised Permit Number A035-248140 to operate the above referenced source, issued pursuant to Section(s) 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period constitutes a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information: (a) the name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) a statement of how and when each petitioner received notice of the Department's action or proposed action; (c) a statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) a statement of the material facts disputed by petitioner, if any; (e) a statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) a statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action and (g) a statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application, have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above, and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition

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request a hearing under Section 120.57, F.S. , and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for extension of time, this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

cm 
William M. Bostwick, Jr., P.E.
Acting District Director

DATE: 3/30/95

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


Clerk

3/30/95
Date

HA
WMB/hhj

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were
mailed before the close of business on 3/30/95 to the listed
persons by, D. Jones.



Best Available Copy
Department of
Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Permittee:
Nations Bank of Florida, National Association
600 Peachtree Street, NE
Atlanta, Georgia 30308

Attention: L. Collins Proctor, Trust Officer

Permit Number: AO35-248140
Date of Issue: 3/30/95
Expiration Date: November 4,
1999
County: Lake
Latitude/Longitude:
28° 55' 02"N / 81° 40' 37"W
UTM: 17-434.0 KmE; 3198.8 KmN
Project: Combined Cycle Gas
Turbine Cogeneration Facility

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-210, 296, and 297. 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:

The permittee can operate a Combined Cycle Gas Turbine Cogeneration Facility. The facility consists of two nominal 42 megawatt (MW) combustion turbines, with exhaust through heat recovery steam generators (HRSG) which are used to power a nominal 26.5 MW steam turbine. The facility utilizes natural gas as the primary fuel, with distillate oil as the emergency backup fuel. Nitrogen oxide emissions from this facility are controlled by water injection.

This emission unit is located adjacent to the Golden Gem Citrus Processing Plant, at the intersection of State Road 19 and Golden Gem Road in Umatilla, Lake County, Florida.

General Conditions are attached to be distributed to the permittee only.

GEN. CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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 and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of noncompliance; and
 - (b) The period of noncompliance, including 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.

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

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GENERAL CONDITIONS:

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
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.
1. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
2. This permit or a copy thereof shall be kept at the work site of the permitted activity.
3. This permit also constitutes:
 - (X) Determination of Best Available Control Technology (BACT)
 - (X) Determination of Prevention of Significant Deterioration (PSD)
 - () Certification of compliance with state Water Quality Standards (Section 401, PL 92-500)
 - (X) Compliance with New Source Performance Standards
4. The permittee shall comply with the following:
 - (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 1. the date, exact place, and time of sampling or measurements;
 2. the person responsible for performing the sampling or measurements;
 3. the dates analyses were performed;
 4. the person responsible for performing the analyses;
 5. the analytical techniques or methods used;
 6. the results of such analyses.
5. 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 the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

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Permittee: Nations Bank of FL,
National Association
Attention: L. Collins Proctor,
Trust Officer

I.D.
Permit Number: AO35-248140.
Date Of Issue:
Expiration Date: November 4, 1999
County: Lake

SPECIFIC CONDITIONS

OPERATING CONDITIONS

1. This source is permitted to operate continuously (8,760 hours per year) [Pursuant to permit application].
2. This source is permitted to use natural gas as the primary fuel and distillate oil as the emergency backup fuel (limited as shown in Specific Condition No. 3 below) [Pursuant to permit application].
3. The permitted materials and utilization rates for this source are as follows [Pursuant to 3/10/94 amendment to AC35-196459]:

Maximum distillate fuel oil consumption shall not exceed either of the following limitations - 2,921 gal/hr/CT; 701,050 gal/yr/CT

Maximum annual firing using distillate fuel oil shall not exceed an equivalent of 10 days (240 hours) per year at full load.

Maximum sulfur (S) content in the oil shall not exceed 0.1 percent by weight.

Maximum heat input based on the lower heating value (LHV) while burning natural gas, shall not exceed 423 MMBtu/hr/CT at 51°F ~~or 403 MMBtu/hr/CT when corrected to 130 conditions~~. The maximum heat input, based on the LHV while burning distillate fuel oil, shall not exceed 424 MMBtu/hr/CT at 51°F ~~or 406 MMBtu/hr/CT when corrected to 130 conditions~~.

Duct firing shall be limited to natural gas firing only, with a maximum heat input of 90 MMBtu/hr based on the higher heating value (HHV) of approximately 1054.5 Btu/ft³.

Duct firing shall be limited to 525,000 MMBtu/year/HRSG-duct burner.

4. Any change in the method of operation, equipment or operating hours which affects air emissions shall be submitted to the Department's Bureau of Air Regulation and the Central Florida District office for prior approval.
5. Any other operating parameters established during compliance testing and/or inspections, that will ensure the proper operation of this facility, are considered part of this operating permit. Said operating parameters include, but are not limited to: Fuel flow rate, heat input rate and water to fuel ratio.
6. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor [Rule 62-296.320(2), F.A.C.].

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Permit Number: AO35-248140
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County: Lake

7. This source must be properly operated and maintained [Rule 62-210.300(2), F.A.C.]. No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly [Rule 62-210.650, F.A.C.].

EMISSION LIMITS

8. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1A, which is attached to, and is a part of, this permit [Pursuant to 3/10/94 amendment to AC35-196459].
9. Visible emissions shall never exceed 20 percent opacity, and the CT shall not exceed 10 percent opacity during full load except as provided in Rule 62-210.700, F.A.C.

COMPLIANCE DETERMINATION

10. Compliance with the NO_x , SO_2 , CO and visible emission standards shall be determined by the following reference methods as described in 40 CFR 60, Appendix A (July 1, 1990) and adopted by reference in Rule 62-297, F.A.C.

- a. Method 9 - Visible Emissions
- b. Method 10 - Determination of the Carbon Monoxide emissions from Stationary Sources
- c. Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent emissions from Stationary Gas Turbines
- d. Method 25A - Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

Compliance with the total volatile organic compound emission limits will be assumed, provided that the CO allowable emission rate is achieved; specific VOC compliance testing is not required.

Compliance tests shall be conducted on an annual basis on or within 60 days prior to July 15 for each parameter marked (A) in the following table:

short term
variance
requested
pending
resolution
of permit
Request
deletion of
VOC's

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I.D.
Permit Number: AO35-248140
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Expiration Date: November 4, 1999
County: Lake

Parameter	Test Method
NO _x (A)	Method 20* with results in pounds per million Btu. stack emissions of NO_x will be measured with the ISO correction equation in Specific Conditions 17 of this permit. Temperature and humidity of the air leaving the boiler will be substituted for ambient temperature and humidity (outside inlet air) in the ISO correction equation.
SO ₂ (A)	SO ₂ emission rate will be calculated using fuel analysis data. Gas analysis will be done using ASTM D1072-80, D3031-81, D4084-82 or D3246 to analyze for sulfur content of gaseous fuels.
VOC (A)	Method 25A. VOC will be tested simultaneously with NO_x, CO and VE at maximum load. Not required if CO limit is met.
CO (A)	Method 10. CO will be tested simultaneously with NO _x , VOC and VE at maximum load. Tests will be conducted for CT only, and CT plus DB. CO test will be three test runs, with each test run to be a minimum of one hour as required by 62-297.310(1) and 62-297.330(1)(a)
Metal Analysis	Metal Analysis will be accepted from the August 1993 test.
VE (A)	Method 9. Two, one-hour VE tests while firing gas at maximum load. One hour with DB on, one hour with DB off. VE readings will be taken simultaneously with tests for NO _x , CO and VOC.

Delete

Delete

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PARAMETER	METHOD OF DETERMINATION
Fuel Type	Natural Gas.
Btu Per Pound of Fuel (A)	Fuel Analysis both low and high. Btu input for CT calculated using lower heating value. Btu input for DB calculated using higher heating value.
CO ₂ and O ₂ (A)	Method 3/3A/20 to be used to measure oxygen for all test conditions.
Ambient temperature, pressure and humidity (A)	Temperature and humidity of the air leaving the chiller (turbine inlet air) will be recorded by the stack test team. This is in addition to the data recorded by the computer. Pressure will be measured as ambient pressure.
30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the mid-point in the range of peak load, as referenced in 40 CFR 60.335 (c)(2), Subpart GG	Peak load based on Btu input will be established and megawatts determined on the day of the test. Multiple load testing for NO_x will be performed in accordance with 40 CFR 60.335 (c)(2).

} Delete

* The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states - Select the eight sampling points at which the lowest O₂ concentrations or highest CO₂ concentrations were obtained - . If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist.

~~11. During performance tests to determine compliance with the proposed standard, measured NO_x emission at 15% oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor, as found in 40 CFR 60.335-11, NSPS Subpart GG.~~

} Delete

~~$$NO_x = (NO_{x \text{ obs}}) (P_{amb}/P_{obs})^{1.5} (H_{obs} - 0.00633) (20.9\% / T_{amb})^{1.53}$$~~

~~where,~~

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~~NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions~~

~~(NO_x obs) = Measured NO_x emission at 15 percent oxygen, ppmv~~

~~P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere ambient pressure)~~

~~P_{obs} = Reference combustor inlet absolute pressure at test ambient pressure~~

~~H_{obs} = Specific humidity of ambient air at test (turbine inlet air = ambient air)~~

~~e = Transcendental constant (2.718)~~

~~T_{amb} = Temperature of ambient air at test (turbine inlet air = ambient air).~~

Delete

12. The permittee shall notify the Central District office of the Department of Environmental Protection, in writing, at least 15 days prior to the date on which each formal compliance test is to begin. Said notification shall include the date, time and place of each such test, as well as the name of the contact person who will be responsible for coordinating and having such tests conducted for the owner. The Department may waive the 15 day notice requirement on a case by case basis [Rule 62-297.340(1)(i), F.A.C.]. ~~Permittee shall also at that time schedule a pre test meeting with the Central District office to review the compliance test procedures required by this permit and 40 CFR 60 Code of Regulations.~~

Delete

13. A copy of the compliance test results shall be submitted to the Department's Central District office within 45 days after the last test run is complete. The test run should provide the actual heat input rate, and at least all of the information listed in Rule 62-297.570(3), F.A.C. Failure to submit any of the above information may invalidate a test. [Rule 62-297.570 and 62-4.070(3), F.A.C.] 16. Testing of emissions shall be conducted with the source operating at 90% to 100% of rated capacity. The source may be tested at less than 90% of rated capacity; however subsequent source operation is limited to 110% of the tested load until a new test is conducted and approved by the Department in writing. Once the source is so limited, operation at higher capacities, not to exceed rated capacity, is allowed for a cumulative total of no more than 15 successive calendar days for purposes of additional compliance testing to regain permitted capacity, with prior notification to the Department [Rule 62-4.070(3), F.A.C.]
14. The stack sampling facility must comply with Rule 62-297.345, F.A.C., regarding minimum requirements that include but are not limited to: location of sampling ports, work platform area hand rails and toe rails, caged ladder or fall arresters, access and electrical power.

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15. A continuous monitoring system shall be utilized to monitor and record the water and fuel consumption on each unit, as well as the ratio of water to fuel being fired in each unit. Water injection shall be utilized for NO_x control. The water to fuel ratios at which annual compliance was achieved, shall be incorporated into this permit and shall be continuously monitored. The system shall meet the requirements of 40 CFR Part 60, Subpart GG.

The permittee shall provide the Central District office with the model number of the continuous monitoring system within 30 days of the date of issue of this operating permit.

16. Combustion control shall be utilized for CO control. The permittee shall leave a space suitable for installation of an oxidation catalyst [Pursuant to 3/10/94 Amendment to AC35-196459].
17. To determine compliance with the capacity factor condition for oil firing, the permittee shall maintain daily records of fuel usage. All records shall be maintained for a minimum of two years after the date of each record, and shall be made available to authorized representatives of the Department upon request.
18. Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment as required in 40 CFR 60 Subpart GG. These records shall be kept by the company for at least two years, and shall be made available for inspection by authorized representatives of the Department.
19. Excess emissions resulting from startup or shutdown are be permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized. Excess emissions resulting from malfunction are permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized, but in no case exceeds two hours in any 24-hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction, are prohibited [Rule 62-210.700, F.A.C.].

In the event that the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Department's Central District Office. Notification shall be conducted in accordance with General Condition (8) of this permit. In case of excess emissions resulting from malfunctions, a full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department [Rules 62-210.700(6) and 62-4.130, F.A.C.].

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The permittee shall submit, to the Department, a written report of emissions in excess of the emission limiting standard as set forth in Rule 62-296.405(1)(a), F.A.C. for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the permittee of the legal liability for violations. All recorded data shall be maintained on file for a period of at least two years. The information supplied in this report consistent with the reporting requirements of 40 CFR 60.7. The report shall be submitted within 30 days following the end of the calendar quarter [Rules 62-297.500(2) and 62-4.070(3), F.A.C.].

RULE REQUIREMENTS

20. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, and Chapter 62-4, Florida Administrative Code.
21. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Dc, and Rule 62-296.800(a), F.A.C., Standards of Performance for Stationary Gas Turbines, and Standards of Performance for Industrial, Commercial and Institutional Steam Generating Units.
22. This source shall comply with Rule 62-297, F.A.C., Stationary Point Source Emission Test Procedures.
23. Pursuant to Rule 62-210.300, F.A.C., Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to, the following: sulfur, nitrogen content and lower heating value of the fuel being fired, fuel usage, hours of operation and air emissions. Annual reports shall be sent to the Department's Central District office. Each calendar year, on or before March 1, an Annual Operations Report, DEP Form 62-210.900(4) must be submitted for the preceding calendar year.
24. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapter 62-297 or any other requirements under federal, state or local law. Additional regulations may impact this facility at some future date. The permittee shall comply with any applicable future regulations when they become effective [Rule 62-210.300, F.A.C.].
25. The application to renew this operating permit shall be submitted to the Central District office of the Department of Environmental Protection at least 60 days prior to the expiration date of this permit [Rules 62-4.050(2) and 62-4.090(1), F.A.C.].

Table 1A. Lake Cogen Limited Allowable Emission mits

Pollutant	Source ^a	Fuel ^b	Basis of Limit	Allowable Emission Limits			
				at 59°F	Maximum Allowable at 51°F ^(e)		
				lb/hr TPY	lb/hr (c)	TPY ^(d)	
NO _x	CT	NG	BACT: 25 ppmvd at 15% O ₂	82.7	391.6	85.5	404.7
	CT	DFO	BACT: 42 ppmvd at 15% O ₂	143.9		148.3	
	DB	NG	BACT: 0.1 lb/MMBtu	18.0		18.0	
	CT&DB	NG		100.7		103.5	
CO	CT	NG	BACT: 28 ppmvd	54.6	350.3	56.0	350.3
	CT	DFO	BACT: 18 ppmvd	35.8		34.5	
	DB	NG	BACT: 0.2 lb/MMBtu	36.0		36.0	
	CT&DB	NG		90.6		92.0	
PM/PM10	CT	NG	BACT: 0.0065 lb/MMBtu	5.0	27.0	5.0	27.0
	CT	DFO	BACT: 0.026 lb/MMBtu	20.0		20.0	
	DB	NG	BACT: 0.006 lb/MMBtu	2.6		2.6	
	CT&DB	NG		7.6		7.6	
SO ₂	CT	DFO	Estab. by Applicant 0.1% S	80.0	21.0	87.6	21.0
VOC	CT	NG	Established by Applicant	3.3	30.8	3.4	30.8
	CT	DFO	Established by Applicant	8.3		8.7	
	DB	NG	Established by Applicant	5.4		5.4	
	CT&DB	NG		8.7		8.8	
Mercury(Hg)	CT	DFO	Established by Applicant	0.0003	--	--	0.0003
Lead(Pb)	CT	DFO	Established by Applicant	0.0008	--	--	0.0008
Beryllium(Be)	CT	DFO	Established by Applicant	0.0002	--	--	0.0002
Sulfuric Acid Mist	CT	DFO	Established by Applicant	0.80	--	--	0.80

^a CT = 2 combustion turbines, DB = 2 duct burners

^b NG = natural gas, DFO = distillate fuel oil

~~^c NO_x limits for 59°F are at 60% relative humidity (ISO conditions)~~

(c) ^d Compliance with the Maximum Allowable Emission Limits shall be demonstrated for CT limits and CT&DB limits.

(d) ^e The Maximum Allowable TPY of emissions, based on a worst case senario, are the sum of the CT emissions while firing NG for 355 days, the CT emissions while firing DFO for 10 days, and DB emissions at the maximum heat input for the previous combinations of CT firing. The DB will only fire NG and only while the CT is firing NG.

(e) ^f These are the Maximum Allowable Emission Limits shall never be exceeded at any temperature and/or operating configuration.

Note: All temperatures cited in this table refer to turbine inlet temperatures.

Permittee: Nations Bank of FL,
National Association
Attention: L. Collins Proctor,
Trust Officer


I.D.
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Permittee: Nations Bank of FL,
National Association
Attention: L. Collins Proctor,
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County: Lake

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

cmc 
William M. Bostwick, Jr., P.E.
Acting District Director

ISSUED: 3/30/95

Heathers copy

LAKE COGEN, LTD.
NCP LAKE POWER, INC., GENERAL PARTNER

One Upper Pond Road
Parsippany, NJ 07054
Telephone (201) 263-6950
Facsimile (201) 263-6977

June 17, 1997

Mr. Al Linero
Florida Department of Environmental Protection
Bureau of Air Quality
2600 Blair Stone Road
Mail Station 5505
Tallahassee, Florida 32399-2400

RECEIVED

JUN 26 1997

**BUREAU OF
AIR REGULATION**

Dear Mr. Linero:

0694801-003-AC

RE: Lake Cogen Limited, Construction Permit No. AC 35-196459 and Permit
to Operate No. AO 35-248140 - Minor Permit Modification Request

As the Authorized Representative for the Lake Cogen facility, I am submitting this letter requesting several minor changes to the facility's Construction Permit, Permit to Operate, and Title V Operating Permit application. This letter is the result of several conversations and meetings I have had recently with our Plant Manager, Mr. Buck Oliver, Mr. Anatoliy Sobolevskiy of Central Region and Mr. Martin Costello of your staff. The changes are basically administrative in nature and reflect issues that have been previously addressed in the Department's Guidance Document DARM-EM-05, "Guidance on Rate of Combustion During Compliance Testing for Combustion Turbines".

The issues that we want to address include the following:

1. Per Operating Permit Specific Condition for Compliance Determination - No. 3:

a. Delete reference to the operation requirements for firing on natural gas or fuel oil under ISO conditions, as shown in "mark-up". This is no longer necessary. ✓

2. Per Operating Permit Specific Condition for Compliance Determination - No. 10:

a. Delete language that requires source testing at either 30, 50, 75 and 100 % of peak load, or at four points in the normal operating range of the gas turbine, and instead, only be required to comply with special condition 13, in which testing is only required within the 90 to 100% rated capacity range of the units. ✓

b. Delete language that requires the ISO correction adjustment. This is no longer necessary. ✓

c. Delete the requirement to perform source testing for VOCs. Per condition, this is only required if the CO emission limit is not met during the annual source test. Consequently, VOC emissions must be reviewed only as a ?

secondary test, if and when CO emissions are found to be greater than allowed, and not as an annual requirement..

d. Request a short term variance from the Department with regard to the July 15, 1997 date for annual compliance testing, until the changes to the permit requested in this letter are finalized. ← ?

~~3.~~ 3. Per Operating Permit Specific Condition for Compliance Determination - No. 11, and Construction Permit Specific Condition for Compliance Determination - No. 13:

a. Condition refers to adjustment of Nox emissions to ISO conditions and includes the calculation for doing such. This entire condition is requested to be deleted. This condition was met with the initial source test and is no longer necessary for the facility. ✓

4. Per Operating Permit Specific Condition for Compliance Determination - No. 12:

a. Delete language requiring the permittee to have a pre-test meeting with the Department prior to conducting the source test.. We agree with the Department that having the pre-test meetings are a good practice and beneficial, but these are not based upon a regulatory requirement and therefore should not be included as a special condition under the operating conditions for the permit. ✓

5. Per Operating Permit Specific Condition for Compliance Determination - Table 1A:

a. Delete language from the Allowable Emissions Table that concerns limits based upon ISO conditions. The Table would then have lb/hr and TPY limits solely based upon one maximum allowable limit standard. ✓

The Lake Cogen facility successfully completed its initial source testing in which testing at the four load points and corrected to ISO conditions for comparison with the NSPS allowable was performed. This was done in 1994. Per paragraph four of the Departments Guidance Document DARM-EM-05, "Guidance on Rate of Operation During Compliance Testing for Combustion Turbines", subsequent annual compliance testing conducted to establish compliance with Nox limits at the Lake Cogen facility should no longer require ISO correction, or testing at the four load points.

As indicated in 1.d. above, we would like to have the Department's approval to delay the annual source test pending resolution of these issues. As instructed by Mr. Costello, by way of this letter, I will go back to Central District and request a postponement of the source test for three months, from July 15, 1997 to October 15, 1997. If additional time is required to amend the permits, an additional postponement period will be requested.

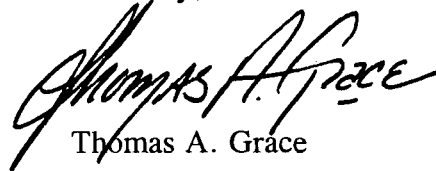
A set of "marked up" permits, a copy of guidance document DARM-EM-05, and a review fee check for \$250.00 are included with this submittal. Due to the need to get on with the annual source test for the Lake Cogen facility I would respectfully request that the Department expedite these modifications in as expedient a manner as possible.

In lieu of amending the permits at this time, an alternative that allows Lake Cogen to proceed with the annual source test in a timely manner would be a letter from the Department that either:

1. provides a one-time approval to conduct source testing at capacity and without correcting to ISO conditions, while the Department takes the time necessary to review and amend the facility permits; or,
2. provides approval to conduct annual source tests at capacity and without correcting to ISO conditions until such time that the facility's Title V operating permit incorporates these changes and is issued.

If you have any questions or require additional information, please feel free to contact me at any time. My telephone number is (201) 263-6913.

Sincerely,



Thomas A. Grace

Manager, Safety and
Regulatory Affairs

w/attachments

cc: J. McTear
B. Oliver
A. Sobolevskiy - FLDEP Central Region
C. Shine - FLDEP Central Region
M. Costello - FLDEP Tallahassee office
File: 273-2010.4



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Lake Cogen Limited
535 N. Ferncreek Ave.
Orlando, FL 32803

Permit Number: AC 35-196459
PSD-FL-176

Expiration Date: June 1, 1993

County: Lake

Latitude/Longitude: 28°55'02"N
81°40'37"W

Project: 108-MW Combined Cycle
Gas Turbine Cogeneration
Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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 drawings, 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 108 combined cycle gas turbine cogeneration facility to be located adjacent to the Golden Gem Citrus Processing Plant in Lake County, Florida. The UTM coordinates are 434.0 km East and 3,198.8 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Lake Cogen Limited's application dated May 1, 1991.
2. Department's sufficiency request dated May 31, 1991.
3. Letter from KBN Engineering and Applied Science, Inc., dated June 20, 1991, to supply additional information.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

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

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

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 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

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 dates 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 corrected promptly.

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1.

2. Unless the Department has determined other concentrations are required to protect public health and safety, predicted acceptable ambient air concentrations (AAC) of the following pollutants shall not be exceeded:

Pollutant	Acceptable Ambient Concentrations		
	8-hrs	24-hrs	Annual
Beryllium	0.02	0.005	0.0004
Lead	1.5	0.36	0.09
Inorganic Mercury Compounds, all forms of vapor, as Hg	NA	NA	0.3

3. Visible emissions shall not exceed 10% opacity.

Operating Rates

4. This source is allowed to operate continuously (8,760 hours per year).

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

5. This source is allowed to use natural gas as the primary fuel and distillate oil as the emergency backup fuel (limited as shown in Specific Condition 6 below).

6. The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follows:

- Maximum distillate fuel oil consumption shall not exceed either of the following limitations: 2,921 gals/hr/CT; 701,050 gals/yr/CT.
- Maximum annual firing using fuel oil shall not exceed an equivalent of 10 days per year at full load.
- Maximum sulfur (S) content in the oil shall not exceed 0.1 percent by weight.
- Maximum heat input shall not exceed 384 MMBtu/hr/CT (gas) or 387 MMBtu/hr/CT (oil) at ISO conditions.
- Duct firing shall be limited to natural gas firing only with a maximum heat input of 225 MMBtu/hr.
- Duct firing shall be limited to 525,000 MMBtu/year/HRSG-duct burner, which is an equivalent to 3,500 hours at 150 MMBtu/hour.

7. Any change in the method of operation, equipment or operating hours shall be submitted to the DER's Bureau of Air Regulation and Central Florida District offices.

8. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

Compliance Determination

9. Initial (I) compliance tests shall be performed on each CT using both fuels. The stack test for each turbine shall be performed within 10 percent of the maximum heat rate input for the tested operating temperature. Annual (A) compliance tests shall be performed on each CT with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with the November 2, 1989, version of 40 CFR 60 Appendix A:

- a. 5 or 17 for PM (I, A, for oil only)
- b. 10 for CO (I)
- c. 9 for VE (I, A)
- d. 20 for NOx (I, A)

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

- e. trace elements of beryllium (Be) shall be tested (I, for oil only) using EMTIC Interim Test Method. As an alternative, Method 104 may be used; or Be may be determined from fuel sample analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.
- f. mercury (Hg) shall be tested using EPA Method 101 (40 CFR 61, Appendix B) (I, for oil only) or fuel sampling analysis using methods acceptable to the Department.

Other DER approved methods may be used for compliance testing after prior Departmental approval.

10. Method 5 or 17 must be used to determine the initial compliance status of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

11. Compliance with the SO₂ emission limit can also be determined by calculations based on fuel analysis using ASTM D2880-71 for the sulfur content of liquid fuels.

12. Compliance with the total volatile organic compound emission limits will be assumed, provided the CO allowable emission rate is achieved; specific VOC compliance testing is not required.

13. During performance tests,, to determine compliance with the proposed NO_x standard, measured NO_x emission at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_x \text{ obs}) \left(\frac{P_{\text{ref}}}{P_{\text{obs}}} \right)^{0.5} e^{19 \left(H_{\text{obs}} - 0.00625 \right) \left(\frac{288^\circ\text{K}}{T_{\text{AMB}}} \right)^{1.53}}$$

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

~~P_{Obs} = Measured combustor inlet absolute pressure at test ambient pressure.~~

~~H_{Obs} = Specific humidity of ambient air at test.~~

~~e = Transcendental constant (2.718).~~

~~T_{Amb} = Temperature of ambient air at test.~~

14. Test results will be the average of 3 valid runs. The Central District office will be notified at least 30 days in advance of the compliance test. The source shall operate between 90% and 100% of permitted capacity as adjusted for ambient temperature during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion.

15. Water injection shall be utilized for NOx control. The water to fuel ratio at which compliance is achieved shall be incorporated into the permit and shall be continuously monitored. In addition, the permittee shall leave a space suitable for future installation of SCR equipment. Alternative combustion controls (i.e., dry low NOx burners) can be installed with prior Department-Bureau of Air Regulation approval provided NOx emission levels are met.

16. Combustion control shall be utilized for CO control. Due to the lack of operational experience with the LM6000 and the uncertainty of actual CO emissions, the permittee shall leave a space suitable for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

17. To determine compliance with the capacity factor condition for oil firing, the Permittee shall maintain daily records of fuel usage. All records shall be maintained for a minimum of three years after the date of each record and shall be made available to representatives of the Department upon request.

18. Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment. These records shall also be kept by the company for at least three years and made available for regulatory agency's inspection.

Rule Requirements

19. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes and Chapters 17-2 and 17-4, Florida Administrative Code.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

20. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Db and F.A.C. Rule 17-2.660(2)(a), Standards of Performance for Stationary Gas Turbines and Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units.

21. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210(1)).

22. This source shall comply with F.A.C. Rule 17-2.700, Stationary Point Source Emission Test Procedures.

23. Pursuant to F.A.C. Rule 17-2.210(2), Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: sulfur, nitrogen content and lower heating value of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Central District office.

24. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

25. An application for an operation permit must be submitted to the Central Florida District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day

of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

Table 1. Allowable Emission Limits Combined Cycle Combustion Turbine Cogeneration Facility

Pollutant	Source ^a	Fuel ^b	Basis of Limit	Allowable Emission Limits	
				lbs/hr	tons/year
NOx	CT	NG	BACT: 25 ppmvd at 15% O ₂	78.8	404.7
	CT	DFO	BACT: 42 ppmvd at 15% O ₂	137.0	
	DB	NG	BACT: 0.1 lb/MMBtu	45.0	
CO	CT	NG	BACT: 42 ppmvd	80.6*	466.5*
	CT	DFO	BACT: 78 ppmvd	151.0*	
	DB	NG	BACT: 0.2 lb/MMBtu	90.0*	
PM/PM10	CT	NG	BACT: 0.0065 lb/MMBtu	5.0	27.0
	CT	DFO	BACT: 0.026 lb/MMBtu	20.0	
	DB	NG	BACT: 0.006 lb/MMBtu	2.6	
SO ₂	CT	DFO	Established by Applicant 0.1% S	80.0	21.0
VOC	CT	NG	Established by Applicant	3.3	30.8
	CT	DFO	Established by Applicant	8.3	
	DB	NG	Established by Applicant	13.5	
Mercury (Hg)	CT	DFO	Established by Applicant	--	0.1
Lead (Pb)	CT	DFO	Established by Applicant	--	0.6
Beryllium (Be)	CT	DFO	Established by Applicant	--	0.0004
Sulfuric Acid Mist	CT	DFO	Established by Applicant	--	7.0

^a CT = combustion turbine

DB = duct burner

^b NG = natural gas

DFO = distillate fuel oil

* Emission limit for CO subject to change should additional control (oxidation catalyst) be required.

DARM-EM-05

TO: District Air Program Administrators
County Air Program Administrators

FROM: Howard L. Rhodes, Director
Division of Air Resources Management

DATE: November 22, 1995

SUBJECT: Guidance on Rate of Operation During Compliance
Testing for Combustion Turbines

This memo is to provide guidance on determining the rate of operation during compliance testing for combustion turbines (CTs).

The mass throughput rate of combustion turbines is inversely proportional to temperature and humidity measured at the CT inlet as a result of the changing air densities encountered. Inlet air temperature is the predominant factor; therefore, higher temperatures will result in a lower heat input rate (MMBtu/hr) and vice versa. The temperature is referenced to the CT inlet temperature rather than ambient temperature, as some CTs are equipped with inlet air conditioning systems (e.g., chillers or evaporative coolers) to maintain optimum operating temperature. Inlet air temperature and ambient temperature are equivalent in cases where no conditioning systems are used. Variations of heat input (capacity) are to be expected due to the range of ambient temperatures and humidities encountered in Florida. Over the usual operating ranges, the CT operating curve (capacity vs. inlet air temperature) is essentially a straight line. An owner or operator of a CT may use these curves in determining the maximum heat input rate for the unit.

The determination of the rate of CT operation during compliance testing is illustrated in the following example. The heat input limit is often referenced to 59 F, and in this example, corresponds to 750 MMBtu/hr (Point A). On the date that compliance testing is conducted, the average ambient (or conditioned) air temperature during the test period is determined to be 80 F. According to the attached curve, the maximum design heat input rate achievable is 700 MMBtu/hr (Point B). The CT has successfully achieved 90 percent of its maximum permitted capacity for this temperature if it is determined to be operating at 630 MMBtu/hr or more (Point C). In this example, the dashed line represents 90 percent of the maximum heat input value achievable over a range of inlet air temperatures. Heat input may vary depending on CT characteristics; therefore, manufacturer's curves for correction to other temperatures shall be provided to the Department, if a source intends to use the curves for compliance purposes. At the request of a permittee, the following condition shall be incorporated into the construction and corresponding operating permits:

"Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and

calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report."

To demonstrate compliance with federal new source performance standard Subpart GG - Standards of Performance for Stationary Gas Turbines, an initial test shall be conducted at four load points and corrected to ISO conditions for comparison to the NSPS allowable. [Subsequent annual compliance tests conducted to establish compliance with NOx limits that are more stringent than the NSPS standard, shall not require an ISO correction or testing at four load points; rather, the testing shall be done at capacity, as defined above. However, when testing shows that NOx emissions exceed the standard when operating at capacity, the company shall recalibrate the NOx emission control system using emission testing at four loads as required in Subpart GG.]

HLR/chf/h

Attachment

[Table 1]

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC 35-196459
PSD-FL-176
Lake County

Mr. Earnest L. Mize, Vice President
Lake Cogen Limited
220 E. Madison Street, Suite 526
P. O. Box 2562
Tampa, Florida 33601

Enclosed is Permit Number AC 35-196459 to construct and operate a cogeneration unit rated at 108 MW at the Golden Gem Citrus Processing facility, Umatilla, Lake County, Florida, issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy
For C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 11-20-91 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.

Kenneth Kosky
(Clerk)

11-20-91
(Date)

Copies furnished to:
Alan Zahm, Central Dist.
Jewell Harper, EPA
Kenneth Kosky, P.E.
Wilbur N. Ladd, Jr., Fish & Wildlife

Final Determination

Lake Cogen Limited
Lake County, Florida

108 MW Combined Cycle Gas Turbine Cogeneration Facility

Permit Number: AC 35-196459
PSD-FL-176

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

November 15, 1991

Final Determination

The Technical Evaluation and Preliminary Determination for the permit for Lake Cogen Limited to construct and operate a 108 MW cogeneration facility at the existing Golden Gem Citrus Processing facility on State Road 19 in Umatilla, Lake County, Florida, was distributed on September 9, 1991. The Notice of Intent to Issue was published in the Orlando Sentinel on September 19, 1991. Copies of the evaluation were available for public inspection at the Department's Tallahassee and Orlando offices. The project will consist of two combustion turbines (CTs), two heat recovery steam generators (HRSG) with duct burners, and a steam turbine. The CTs will be capable of generating approximately 84 MW while operating in simple cycle and 108 MW when in combined cycles.

The U.S. Environmental Protection Agency (EPA) submitted a letter commenting on the Preliminary Determination October 9, 1991 stating that they had "no adverse comment."

On October 15, 1991, the U.S. Fish and Wildlife Service (FWS), Department of Interior, submitted a letter commenting on the Preliminary Determination. With regard to the Best Available Control Technology (BACT), FWS believed that selective catalytic reduction (SCR) should have been required in addition to wet injection system to control NO_x . FWS requested that future applicants "include not only the consumed SO_2 increment from this facility" but also address the "potential impact to Class I Area Air Quality Related Values (AQRV) through cumulative air quality modeling analysis of all sources in the area"; FDER will relay these FWS requests to future applicants. FWS pointed out that the estimated emission limits for mercury, beryllium, lead, and sulfuric acid mist stated in the application were lower than the draft permit conditions and FDER has corrected this in Table 1.

Regarding the use of SCR in combination with wet injection to control NO_x , our BACT analysis indicated the incremental cost per ton of NO_x removed using SCR would exceed \$7000. This cost exceeds that which has been judged to be reasonable for NO_x control in Florida. However, FDER did require that the applicant make provisions for future installation of SCR, and an oxidation catalyst, should this equipment be justifiable in the future. The applicant provided a letter October 24, 1991 responding to FWS' comments which is included in the attachments.

The applicant provided comments on the Preliminary Determination October 9, asking that we modify the expiration date from June 1, 1993 to June 1, 1994; which FDER has done.

The final action of the Department will be to issue construction permit AC 35-196459 as proposed in the Technical Evaluation and Preliminary Determination.



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Lake Cogen Limited
535 N. Ferncreek Ave.
Orlando, FL 32803

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994
County: Lake
Latitude/Longitude: 28°55'02"N
81°40'37"W
Project: 108-MW Combined Cycle
Gas Turbine Cogeneration
Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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 drawings, 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 108 combined cycle gas turbine cogeneration facility to be located adjacent to the Golden Gem Citrus Processing Plant in Lake County, Florida. The UTM coordinates are 434.0 km East and 3,198.8 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Lake Cogen Limited's application dated May 1, 1991.
2. Department's sufficiency request dated May 31, 1991.
3. Letter from KBN Engineering and Applied Science, Inc., dated June 20, 1991, to supply additional information.
4. Letter from EPA dated October 9, 1991.
5. Letter from Fish and Wildlife dated October 15, 1991.
6. Letters from KBN Engineering and Applied Science, Inc. dated October 9 and October 24, 1991.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

GENERAL CONDITIONS:

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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

GENERAL CONDITIONS:

arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

GENERAL CONDITIONS:

this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates 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 corrected promptly.

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1.

2. Unless the Department has determined other concentrations are required to protect public health and safety, predicted acceptable ambient air concentrations (AAC) of the following pollutants shall not be exceeded:

Pollutant	Acceptable Ambient Concentrations		
	8-hrs	24-hrs	Annual
Beryllium	0.02	0.005	0.0004
Lead	1.5	0.36	0.09
Inorganic Mercury	NA	NA	0.3
Compounds, all forms of vapor, as Hg			

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

SPECIFIC CONDITIONS:

3. Visible emissions shall not exceed 10% opacity.

Operating Rates

4. This source is allowed to operate continuously (8,760 hours per year).

5. This source is allowed to use natural gas as the primary fuel and distillate oil as the emergency backup fuel (limited as shown in Specific Condition 6 below).

6. The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follows:

- Maximum distillate fuel oil consumption shall not exceed either of the following limitations: 2,921 gals/hr/CT; 701,050 gals/yr/CT.
- Maximum annual firing using fuel oil shall not exceed an equivalent of 10 days per year at full load.
- Maximum sulfur (S) content in the oil shall not exceed 0.1 percent by weight.
- Maximum heat input shall not exceed 384 MMBtu/hr/CT (gas) or 387 MMBtu/hr/CT (oil) at ISO conditions.
- Duct firing shall be limited to natural gas firing only with a maximum heat input of 225 MMBtu/hr.
- Duct firing shall be limited to 525,000 MMBtu/year/HRSG-duct burner, which is an equivalent to 3,500 hours at 150 MMBtu/hour.

7. Any change in the method of operation, equipment or operating hours shall be submitted to the DER's Bureau of Air Regulation and Central Florida District offices.

8. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

Compliance Determination

9. Initial (I) compliance tests shall be performed on each CT using both fuels. The stack test for each turbine shall be performed within 10 percent of the maximum heat rate input for the tested operating temperature. Annual (A) compliance tests shall be performed on each CT with the fuel(s) used for more than 400 hours

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

SPECIFIC CONDITIONS:

in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with the November 2, 1989, version of 40 CFR 60 Appendix A:

- a. 5 or 17 for PM (I, A, for oil only)
- b. 10 for CO (I)
- c. 9 for VE (I, A)
- d. 20 for NO_x (I, A)
- e. Trace elements of beryllium (Be) shall be tested (I, for oil only) using EMTIC Interim Test Method. As an alternative, Method 104 may be used; or Be may be determined from fuel sample analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.
- f. Mercury (Hg) shall be tested using EPA Method 101 (40 CFR 61, Appendix B) (I, for oil only) or fuel sampling analysis using methods acceptable to the Department.

Other DER approved methods may be used for compliance testing after prior Departmental approval.

10. Method 5 or 17 must be used to determine the initial compliance status of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

11. Compliance with the SO₂ emission limit can also be determined by calculations based on fuel analysis using ASTM D2880-71 for the sulfur content of liquid fuels.

12. Compliance with the total volatile organic compound emission limits will be assumed, provided the CO allowable emission rate is achieved; specific VOC compliance testing is not required.

13. ~~During performance tests, the proposed NO_x standard, the~~ ^{INITIAL} To determine compliance ^{with the NSPS standard for NO_x} measured NO_x emission at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_x \text{ obs}) \left(\frac{P_{\text{ref}}}{P_{\text{obs}}} \right)^{0.5} e^{19} (H_{\text{obs}} - 0.00633) \left(\frac{288^\circ K}{T_{\text{AMB}}} \right)^{1.53}$$

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

SPECIFIC CONDITIONS:

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.

H_{obs} = Specific humidity of ambient air at test.

e = Transcendental constant (2.718).

T_{AMB} = Temperature of ambient air at test.

→ * 14. Test results will be the average of 3 valid runs. The Central District office shall be notified at least 30 days in advance of the compliance test. The source shall operate between 90% and 100% of permitted capacity as adjusted for ambient temperature during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion.

15. Water injection shall be utilized for NO_x control. The water to fuel ratio at which compliance is achieved shall be incorporated into the operation permit and shall be continuously monitored. In addition, the permittee shall leave a space suitable for future installation of SCR equipment. Alternative combustion controls (i.e., dry low NO_x burners) can be installed with prior Department-Bureau of Air Regulation approval provided NO_x emission levels are met.

16. Combustion control shall be utilized for CO control. Due to the lack of operational experience with the LM6000 and the uncertainty of actual CO emissions, the permittee shall leave a space suitable for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

SPECIFIC CONDITIONS:

17. To determine compliance with the capacity factor condition for oil firing, the Permittee shall maintain daily records of fuel usage. All records shall be maintained for a minimum of three years after the date of each record and shall be made available to representatives of the Department upon request.

18. Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment. These records shall also be kept by the company for at least three years and made available for regulatory agency's inspection.

Rule Requirements

19. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes and Chapters 17-2 and 17-4, Florida Administrative Code.

20. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Db and F.A.C. Rule 17-2.660(2)(a), Standards of Performance for Stationary Gas Turbines and Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units.

21. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210(1)).

22. This source shall comply with F.A.C. Rule 17-2.700, Stationary Point Source Emission Test Procedures.

23. Pursuant to F.A.C. Rule 17-2.210(2), Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: sulfur, nitrogen content and lower heating value of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Central District office.

24. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1994

SPECIFIC CONDITIONS:

25. An application for an operation permit must be submitted to the Central Florida District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 20th day
of November, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



Carol M. Browner, Secretary

Table 1. Allowable Emission Limits Combined Cycle Combustion Turbine Cogeneration Facility

Pollutant	Source ^a	Fuel ^b	Basis of Limit	Allowable Emission Limits	
				lbs/hr	tons/year
NOx	CT	NG	BACT: 25 ppmvd at 15% O ₂	78.8	404.7
	CT	DFO	BACT: 42 ppmvd at 15% O ₂	137.0	
	DB	NG	BACT: 0.1 lb/MMBtu	45.0	
CO	CT	NG	BACT: 42 ppmvd	80.6*	466.5*
	CT	DFO	BACT: 78 ppmvd	151.0*	
	DB	NG	BACT: 0.2 lb/MMBtu	90.0*	
PM/PM ₁₀	CT	NG	BACT: 0.0065 lb/MMBtu	5.0	27.0
	CT	DFO	BACT: 0.026 lb/MMBtu	20.0	
	DB	NG	BACT: 0.006 lb/MMBtu	2.6	
SO ₂	CT	DFO	Established by Applicant 0.1% S	80.0	21.0
VOC	CT	NG	Established by Applicant	3.3	30.8
	CT	DFO	Established by Applicant	8.3	
	DB	NG	Established by Applicant	13.5	
Mercury (Hg)	CT	DFO	Established by Applicant	--	0.0003
Lead (Pb)	CT	DFO	Established by Applicant	--	0.0008
Beryllium (Be)	CT	DFO	Established by Applicant	--	0.0002
Sulfuric Acid Mist	CT	DFO	Established by Applicant	--	0.8

^a CT = combustion turbine

DB = duct burner

^b NG = natural gas

DFO = distillate fuel oil

* Emission limit for CO subject to change should additional control (oxidation catalyst) be required.

Best Available Control Technology (BACT) Determination
Lake Cogen Limited
Lake County

The applicant proposes to install a combustion turbine generator at their facility in Lake County. The facility will consist of two nominal 42 megawatt (MW) combustion turbines (CT), with exhaust through heat recovery steam generators (HRSG) which will be used to power a nominal 244 MW steam turbine.

The combustion turbine will be capable of only combined cycle operation. The applicant requested that the combustion turbine use either natural gas or distillate oil. The applicant has indicated the maximum annual tonnage of regulated air pollutants emitted from the facility based on 100 percent capacity and type of fuel fired at ISO conditions to be as follows:

Pollutant	Combustion Fuel Oil ^a (tons/yr)	Turbine Gas ^b (tons/yr)	Duct Burner Gas ^c (tons/yr)	Total ^d (tons/yr)	PSD Signi. Emission Rate (tons/yr)
NOx	16.4	344.8	52.3	404.7	40
SO ₂	9.6	10.1	1.58	21.0	40
PM	2.4	22.0	3.16	27.0	25
PM ₁₀	2.4	22.0	3.16	27.0	15
CO	18.2	353.2	105.0	466.5	100
VOC	1.0	14.4	15.8	30.8	40
H ₂ SO ₄	0.8	NEG	NEG	0.8	7
Be	0.0002	NEG	NEG	0.0002	0.0004
Hg	0.0003	NEG	NEG	0.0003	0.1
Pb	0.0008	NEG	NEG	0.0008	0.6

- ^a Performance based on NOx emissions of 42 ppmvd (corrected to 15 percent O₂); SO₂ emissions based on an average sulfur content of 0.1 percent sulfur; annual emission data based on 240 hr/yr (10 days/year).
- ^b Performance based on NOx emissions of 25 ppmvd (corrected to 15 percent O₂); annual emissions data based on 8,760 hours/year (365 days/yr operation).
- ^c Performance based on 150 x 10⁶ Btu/hr heat input per HRSG and 3,500 hours per year operation.
- ^d Annual emissions data based on fuel oil gas turbine 240 hr/yr, natural gas combustion turbine 8,520 hr/yr, and natural gas duct burner 3,500 hr/yr operation.

Florida Administrative Code Rule 17-2.500(2) (f) (3) requires a BACT review for all regulated pollutants emitted in an amount equal to or greater than the significant emission rates listed in the previous table.

Date of Receipt of a BACT Application:

May 3, 1991

BACT Determination Requested by the Applicant:

<u>Pollutant</u>	<u>Determination</u>
NOx	25 ppmvd @ 15% O ₂ (natural gas burning)--CT 42 ppmvd @ 15% O ₂ (distillate oil firing)--CT 0.1 lb/10 ⁶ Btu--duct burner
CO	42 ppmvd @ 15% O ₂ (natural gas burning)--CT 78 ppmvd @ 15% O ₂ (distillate firing)--CT 0.2 lb/10 ⁶ Btu-Duct Burner
PM and PM ₁₀	0.0065 lb/10 ⁶ Btu (natural gas burning)--CT 0.0258 lb/10 ⁶ (distillate oil firing)--CT 0.006 lb/10 ⁶ Btu-duct burner

BACT Determination Procedure:

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards or BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category. If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly

evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from combined cycle power plants can be grouped into categories based upon what control equipment and techniques are available to control emissions from these facilities.

Using this approach, the emissions can be classified as follows:

- o Combustion Products (e.g., Particulates). Controlled generally by good combustion of clean fuels.
- o Products of Incomplete Combustion (e.g., CO). Controlled generally by proper combustion techniques.
- o Acid Gases (e.g., NOx). Controlled generally by gaseous control devices.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "nonregulated" air pollutants is considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., particulates, sulfur dioxide, fluorides, sulfuric acid mist, etc.), if a reduction in "nonregulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

Combustion Products:

The projected emissions of particulate matter and PM10 from the Lake Cogen Limited facility surpass the significant emission rates given in Florida Administrative Code Rule 17-2.500, Table 500-2.

A PM/PM10 emissions limitations of 0.0065 lb/MMBtu from the CT when firing natural gas and 0.0258 lb/MMBtu for No. 2 fuel oil firing is reasonable as BACT for the Lake Cogen facility. The duct burner PM/PM10 emission rate of 0.006 lb/MMBtu is reasonable or BACT.

Products of Incomplete Combustion:

The emissions of carbon monoxide exceed the PSD significant emission rate of 100 tpy. The emissions of CO are affected by the amount of wet injection used for the control of NOx. The applicant has indicated that the carbon monoxide emissions from the proposed turbines are based on exhaust concentrations of 42 ppmvd for natural gas and 78 ppmvd for No. 2 fuel oil.

A review of the BACT/LAER clearinghouse indicates that several of the combustion turbines using wet injection to control NOx to 25 ppmvd (corrected to 15 percent O2) have been permitted with CO limitations that are similar to those proposed by the applicant. The proposed CO emissions are, however, higher than other similar-sized CTs. The applicant has stated that the CT is a new design, and CO margins must be higher. The applicant expects the CO emissions to be half that guaranteed by the manufacturer. Although the majority of BACT emissions limitations have been based on combustion controls for carbon monoxide and volatile organic compounds minimization, additional control is achievable through the use of catalytic oxidation.

Catalytic oxidation is a postcombustion control that has been employed in CO nonattainment areas where regulations have required CO emission levels to be less than those associated with wet injection. These installations have been required to use LAER technology and typically have CO limits in the 10-ppm range (corrected to dry conditions).

In an oxidation catalyst control system, CO emissions are reduced by allowing unburned CO to react with oxygen at the surface of a precious metal catalyst such as platinum. Combustion of CO starts at about 300°F, with efficiencies above 90 percent occurring at temperatures above 600°F. Catalytic oxidation occurs at temperatures 50 percent lower than that of thermal oxidation, which reduces the amount of thermal energy required. For CT/HRSG combinations, the oxidation catalyst can be located directly after the CT or in the HRSG. Catalyst size depends upon the exhaust flow, temperature, and desired efficiency. The existing gas turbine applications have been limited to smaller cogeneration facilities burning natural gas.

Given the applicant's proposed BACT level for carbon monoxide stated above, an evaluation can be made of the cost and associated benefit of using catalytic oxidation as follows:

The estimated annualized cost of a CO oxidation catalyst is \$968,120 with a cost effectiveness of about \$2,800/ton of CO removed. The cost effectiveness is based on 75 percent efficiency. No costs are associated with combustion techniques since they are inherent to design. However, at a catalyst back pressure of about 2 inches, an energy penalty of about 1,925,000 kwh/yr would result at 100 percent load.

It should be noted that the proposed basis for the CO emissions may be high based on the applicant's statements. A review of previous projects indicates that some equipment being evaluated has proposed CO emission rates as low as 10 ppmvd for natural gas firing and as low as 26 ppmvd for oil firing. As this is the case, the applicant's proposal for CO emissions may exceed that calculated above. Should the compliance testing indicate these low levels of CO emissions, the cost of using an oxidation catalyst would be

prohibitive. However, at the proposed level, \$2,800/ton is justifiable based on other permitting decisions. As this is the case, the decision to require an oxidation catalyst should be based on a cost/benefit analysis once compliance testing has been completed. If the actual emission rates were equivalent to that of these other facilities, the cost of using catalytic oxidation would likely be greater.

For these reasons, it appears that the limit proposed by the applicant is reasonable pending actual testing. If lower limits are obtained during testing, the operation permit should reflect a lower limit.

Emission of volatile organic compounds are each below the significant level and therefore do not require a BACT analysis.

Acid Gases

The emissions of nitrogen oxides represent a significant proportion of the total emissions and need to be controlled if deemed appropriate.

The applicant has stated that BACT for nitrogen oxides will be met by using wet (water) injection necessary to limit emissions to 42 ppmvd or 25 ppmvd at 15% oxygen when burning No. 2 fuel oil or natural gas, respectively.

A review of the EPA's BACT/LAER Clearinghouse indicates that the lowest NOx emission limit established to date for a combustion turbine is 4.5 ppmvd at 15% oxygen. This level of control was accomplished through the use of water injection and a selective catalytic reduction (SCR) system.

Selective catalytic reduction is a post-combustion method for control of NOx emissions. The SCR process combines vaporized ammonia with NOx in the presence of a catalyst to form nitrogen and water. The vaporized ammonia is injected into the exhaust gases prior to passage through the catalyst bed. The SCR process can achieve up to 90% reduction of NOx with a new catalyst. As the catalyst ages, the maximum NOx reduction will decrease to approximately 86 percent.

A review of the combined cycle facilities in which SCR has been established as a BACT requirement indicates that the majority of these facilities are also intended to operate at high capacity factors. As this is the case, the proposed project is similar to other facilities in which SCR has been established as BACT.

Given the applicant's proposed BACT level for nitrogen oxides control stated above, an evaluation can be made of the cost and associated benefit of using SCR as follows:

The applicant has indicated that the total levelized annual cost (operating plus amortized capital cost) to install SCR for natural gas firing at 100 percent capacity factor is \$1,955,300. Taking into consideration the total annual cost, a cost/benefit analysis of using SCR can now be developed.

Based on the information supplied by the applicant, it is estimated that the maximum annual NOx emissions with wet injection from the Lake Cogen Limited facility will be 405 tons/year. Assuming that SCR would reduce the NOx emissions to a level of 9 ppmvd when firing natural gas and 17 ppmvd when firing fuel oil, about 263 tons of NOx annually. When this reduction is taken into consideration with the total levelized annual cost of \$1,955,300, the cost per ton of controlling NOx is \$7,443. This calculated cost is higher than has previously been approved as BACT.

Since SCR has been determined to be BACT for several combined cycle facilities, the EPA has clearly stated that there must be unique circumstances to consider the rejection of such control on the basis of economics.

In a recent letter from EPA Region IV to the Department regarding the permitting of a combined cycle facility (Tropicana Products, Inc.), the following statement was made:

"In order to reject a control option on the basis of economic considerations, the applicant must show why the costs associated with the control are significantly higher for this specific project than for other similar projects that have installed this control system or in general for controlling the pollutant."

For fuel oil firing, the cost associated with controlling NOx emissions must take into account the potential operating problems that can occur with using SCR in the oil firing mode.

A concern associated with the use of SCR on combined cycle projects is the formation of ammonium bisulfate. For the SCR process, ammonium bisulfate can be formed due to the reaction of sulfur in the fuel and the ammonia injected. The ammonium bisulfate formed has a tendency to plug the tubes of the heat recovery steam generator leading to operational problems. As this the case, SCR has been judged to be technically infeasible for oil firing in some previous BACT determinations.

The latest information available now indicates that SCR can be used for oil firing provided that adjustments are made in the ammonia to NOx injection ratio. For natural gas firing operation NOx emissions can be controlled with up to a 90 percent efficiency using a 1 to 1 or greater injection ratio. By lowering the injection ratio for oil firing, testing has indicated that NOx can be controlled with efficiencies ranging from 60 to 75 percent. When the injection ratio is lowered there is not a problem with ammonium

bisulfate formation since essentially all of the ammonia is able to react with the nitrogen oxides present in the combustion gases.

Based on this strategy SCR has been both proposed and established as BACT for oil fired combined cycle facilities with NOx emission limits ranging from 11.7 to 25 ppmvd depending on the efficiency of control established.

Environmental Impact Analysis

The predominant environmental impacts associated with this proposal are related to the use of SCR for NOx control. The use of SCR results in emissions of ammonia, which may increase with increasing levels of NOx control. In addition, some catalysts may contain substances which are listed as hazardous waste, thereby creating an additional environmental burden. Also, air emissions result from the lost generations that must be replaced. The lost generation is due to the back pressure on the turbine covered by the catalyst. Although the use of SCR does have some environmental impacts, the disadvantages may outweigh the benefit which would be provided by reducing nitrogen oxide emissions by 80 percent or greater. The benefit of NOx control by using SCR is substantiated by the fact that nearly one half of all BACT determinations have established SCR as the control measure for nitrogen oxides over the last five years.

In addition to the criteria pollutants, the impacts of toxic pollutants associated with the combustion of natural gas and No. 2 fuel oil have been evaluated. Toxics are expected to be emitted in minimal amounts, with the total emissions combined to be less than 0.1 tons per year.

Although the emissions of the toxic pollutants could be controlled by particulate control devices such as a baghouse or scrubber, the amount of emission reductions would not warrant the added expense. As this is the case, the Department does not believe that the BACT determination would be affected by the emissions of the toxic pollutants associated with the firing of natural gas or No. 2 fuel oil.

Potentially Sensitive Concerns:

With regard to controlling NOx emissions with SCR, the applicant has identified the following technical limitations:

1. SCR would reduce output of combustion turbines by one-half percent.
2. SCR could result in the release of unreacted quantities of ammonia to the atmosphere.
3. SCR would require handling of ammonia by plant operators. Since it is a hazardous material, there is a concern about safety and productivity of operators.

4. SCR results in contaminated catalyst from flue gas trace elements which could be considered hazardous. Safety of operators and disposal of spent catalyst is a concern.

The combustion turbines proposed for the project (GE LM6000) are a new aircraft derivative machine that is highly efficient. Therefore, the amount of NOx emitted from the proposed project can be related to emissions from other combustion turbines after adjusting for efficiency; in other words, relating the emissions to the amount of energy produced. Based on information supplied by the applicant, the relative NOx emissions for the project compared to other CTs are: LM6000 CT = 20.6 ppmvd; advanced CT = 21.8 ppmvd, and conventional CT = 25 ppmvd (corrected to 15% O₂). This comparison shows the amount of NOx emitted per unit of electrical energy produced will be 17.6 percent lower for the CT proposed for the project compared with a conventional CT.

BACT Determination by DER

NOx Control

A review of the permitting activities for combined cycle proposals across the nation indicates that SCR has been required and most recently proposed for installations with a variety of operating conditions (i.e., natural gas, fuel oil, capacity factors ranging from low to high). However, the cost and other concerns expressed by the applicant are valid, and advanced NOx combustion controls have been accepted as BACT on similar projects.

The information that the applicant presented and Department calculations indicates that the incremental cost of controlling NOx (\$7,443/ton) is high compared to other BACT determinations which require SCR. Based on the information presented by the applicant and the studies conducted, the Department believes that the use of SCR for NOx control is not justifiable as BACT. Therefore, the Department is willing to accept wet injection for NOx control when firing natural gas and distillate oil. However, distillate oil firing will be limited to 240 hours per year. In addition, the permittee shall install a duct module suitable for future installation of SCR equipment.

The emissions of NOx from the duct burners will be limited to 0.1 lb/MMBtu which has been the BACT limit established for similar facilities. Duct firing will be used for supplying steam and limited to an equivalent of 3,500 hours/year.

CO Control

A national review of permitting activities involving oxidation catalyst for CO control indicates that existing oxidation catalyst applications primarily have been limited to smaller cogeneration facilities burning natural gas. Oxidation catalysts have not been used on fuel-oil-fired CT's or combined cycle facilities. the use

of sulfur containing fuel with an oxidation catalyst system would result in an increase of SO₃ emissions and increase the corrosive effects to the stack. In addition, trace metals in the fuel could result in catalyst poisoning during prolonged periods of fuel oil use.

The information that the applicant presented and Department calculations indicate that the incremental cost of controlling CO with an oxidation catalyst is approximately \$2,800/ton. This is based on a 76 percent reduction efficiency from 42 ppmvd to 10 ppmvd. An energy penalty would result from the expected 2 inch pressure drop across the catalyst. This penalty is estimated to be 1,925,000 kwh/yr at 100 percent load. Based on the information presented by the applicant and the studies conducted by the Department, the use of oxidation catalyst for CO control is not justifiable at this time as BACT. Therefore, the Department is willing to accept combustion control for CO control when firing natural gas or distillate oil. However, distillate oil firing will be limited to 240 hours per year. Also, due to the lack of operational experience with the LM6000 and the uncertainty of actual CO emissions, the permittee shall install a duct module suitable for future installation of an oxidation catalyst.

Other Emissions Control

The emissions limitations for PM and PM₁₀ are based on previous BACT determinations for similar facilities.

The emission limits for the Lake Cogen Limited project are thereby established as follows:

Pollutant	Emission Limit		
	CT (Natural Gas Firing)	CT (Fuel Oil Firing)*	Duct Burner+
NOx	25 ppmvd @ 15% O ₂	42 ppmvd @ 15% O ₂	0.1 lb/MMBtu
CO	42 ppmvd	78 ppmvd	0.2 lb/MMBtu
PM & PM ₁₀	0.0065 lb/MMBtu	0.026 lb/MMBtu	0.006 lb/MMBtu

* Fuel oil usage limited to 10 days/year equivalent of the total heat input on an annual basis.

+ Natural gas will only be used for supplemental firing for no greater than 3,500 full-load equivalent hours on a total annual Btu basis.

Details of the Analysis May Be Obtained By Contacting:

Preston Lewis, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:



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

November 12, 1991
Date

Approved By:



Carol M. Browner, Secretary
Department of Environmental
Regulation

November 20, 1991
Date

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Tom Grace

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Mr. Thomas A. Grace
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 Lake Cogeni Ltd.
 c/o NCP Lake Power, Inc
 One Upper Pond Road
 Parsippany, NJ 07054

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Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400

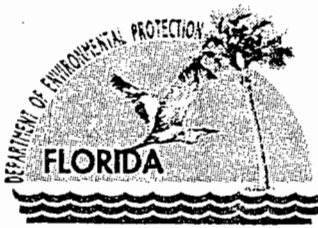
BUREAU OF AIR REGULATION

APR 23 2001

RECEIVED

01/23/2001





Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

April 16, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Services
Lake Cogen, Ltd.
c/o NCP Lake Power, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Notice of Permit Denial
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

Enclosed is one copy of the Department's "NOTICE OF PERMIT DENIAL".

The Department will take no further action on this project and maintains that the facility must continue to comply with the CO emission limitations currently in place. Should you wish to pursue any project of this nature in the future, it must be submitted to the Department as a new application.

If you have any questions, please call Michael P. Halpin, P.E. at 850/921-9519.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources Management

CHF/mph

Enclosures

AAL/mph

cc: K. F. Kosky, Golder Associates
Len Kozlov, DEP CD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

"More Protection, Less Process"

Printed on recycled paper.

In the Matter of an
Application for Permit by:

Mr. Thomas A. Grace, Director – Environmental Services
NCP Lake Power, Inc.
One Upper Pond Road
Parsippany, NJ 07054

DEP File No. 0694801-004-AC, PSD-FL-176A
Lake Cogen, Ltd
Lake County

NOTICE OF PERMIT DENIAL

The applicant, Lake Cogen, Ltd., facility located in Umatilla, Florida, applied on April 21, 2000 to the Department of Environmental Protection for a permit to modify the CO emission limitation.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above actions are not exempt from permitting procedures. The Department has determined that a PSD permit modification is required for the proposed work.

The Department hereby denies the permit for the following reason:

The applicant failed to respond to the Department's requests for additional information.

A person whose substantial interests are affected by the Department's permit denial may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this Notice of Permit Denial. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of receipt of this Notice of Permit Denial. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action; and (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the

presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

This Notice constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition, which conforms to Rule 62-110.106, F.A.C. Upon timely filing of a petition or a request for an extension of time this Notice will not be effective until further Order of the Department.

If either a petition for administrative hearing or a request for extension of time is not timely filed with the Department, then this Notice shall constitute final agency action. Any party to this order would then have the right to seek judicial review pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.



Howard L. Rhodes, Director
Division of Air Resources
Management

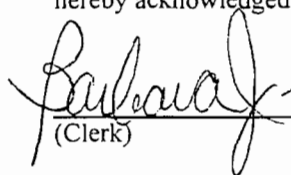
CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Permit Denial and all copies were sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 4/17/01 to the person(s) listed:

Mr. Thomas A. Grace *
Mr. K.F. Kosky, P.E.
Mr. Len Kozlov, DEP - CD
Mr. Gregg Worley, EPA
Mr. John Bunyak, NPS

Clerk Stamp

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

 Friday 4/17/01
(Clerk) (Date)

LAKE COGEN, LTD.

NCP LAKE POWER, INC., GENERAL PARTNER

April 4, 2001

• One Upper Pond Road • Parsippany, NJ 07054
Tel (973) 263-6950 • Fax (973) 263-6977

Mr. Al Linero, P.E.
Administrator – New Source Review Section
Florida Department of Environmental Protection
Marjory Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

RECEIVED

APR 10 2001

BUREAU OF AIR REGULATION

RE: Lake Cogeneration; DEP File No. 0694801-004-AC (PSD-FL-176A);
Modification of CO Emission Limitation – Request for additional information

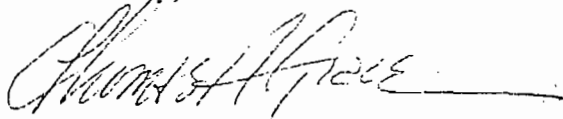
Dear Mr. Linero:

This is in response to your recent inquiry concerning the status of the referenced application. The project has decided not to proceed further with this modification request at the present time. Based upon the facts that the additional information requested by the Department was not forwarded and that the project has not taken further action to promote the modification request, we also understand that the Department will deny the initial application for the modification request that was filed April 21, 2000. Therefore, the project will continue to maintain the CO emission limits as currently addressed within its Title V Operating Permit.

I do not know if the information has cycled down into your section yet, but in December 2000, GPU International sold its partnership share of the Lake Cogen project to Aquila. Aquila has taken over as the Managing Partner for the project. With the transfer, I also went with the project to join the Aquila team and continue to work with the project. We provided notice to the Department of the change in early January 2001.

Thank-you for the help provided in trying to get this modification through. Please convey our thanks to Mr. Halprin also.

Sincerely,



Thomas A. Grace, CHMM
Director – Environmental Services

Cc: J. LaBauve
L. Rajter
C. Crowder
J. Miller


File: 273-2010.4


L01031lake

Memorandum

Florida Department of Environmental Protection

TO: Howard L. Rhodes

THRU: C. H. Fancy 
A. A. Linero

FROM: Michael P. Halpin 

DATE: April 16, 2001

SUBJECT: Lake Cogen PSD Permit modification

Attached for approval and signature is a "NOTICE OF PERMIT DENIAL" for the subject facility.

Lake Cogen requested this modification nearly a year ago, on April 21, 2000. A "Request for Additional Information" was promptly sent to the applicant on April 26, 2000. After repeated attempts, the applicant failed to respond to the Department's request. On February 23, 2001 a "Final Request for Additional Information" was sent to the applicant, indicating the Department's intent to deny the application if a response was not received within 30 days. On April 4, 2001 the applicant responded indicating that they did not intend to further pursue the modification at the present time, and stated that they understood that the application would be denied.

I recommend your approval and signature.

Attachments

/mph

U.S. Postal Service CERTIFIED MAIL RECEIPT (Domestic Mail Only; No Insurance Coverage Provided)	
Article Sent To: <i>Thomas A. Grace</i>	
Postage \$	Postmark Here
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees \$	
Name (Please Print Clearly) (to be completed by mailer) <i>Thomas A. Grace</i> Street, Apt. No., or PO Box No. <i>One Upper Pond Road</i> City, State, ZIP+4 <i>Parsippany NJ 07054</i>	
PS Form 3800, July 1999 See Reverse for Instructions	

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1 Article Addressed to:
 Mr. Thomas A. Grace
 Director - Environmental Health
 & Safety
 c/o GPU International, Inc.
 One Upper Pond Road
 Parsippany, NJ 07054

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery
7-28

C. Signature
X [Signature] ☐ Agent
☐ Addressee

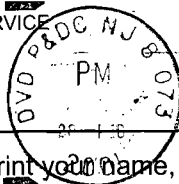
D. Is delivery address different from item 1? ☐ Yes
 If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2 Article Number (Copy from service label)
 7099 3400 0000 1449 3942

UNITED STATES POSTAL SERVICE



First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

RECEIVED

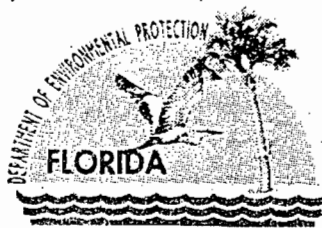
MAR 05 2001

BUREAU OF AIR REGULATION

Dept. of Environmental Protection
Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400

39986542





Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

February 23, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Health and Safety
c/o GPU International, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Final Request for Additional Information
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

On April 21, 2000 the Department received your application for a modification to the air construction permit for Lake Cogeneration Limited. The application was incomplete. On April 26, 2000, the Department requested you to submit additional information that would allow continued processing of your application. To date, we have not received the requested additional information. Rule 62-4.055(1) of the Florida Administrative Code requires the following:

"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application."

It has been more than ninety (90) days since our initial request for additional information. The nature of the requested information is such that a diligent effort would have yielded it by now and would certainly yield it within the next thirty (30) days. We are providing you an additional thirty (30) days from the day this letter is received to provide the requested additional information (copy attached). If you fail to respond to this request before this deadline, the Department will deny your application.

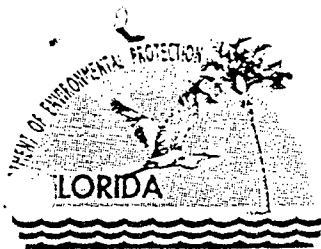
If you have any questions regarding this matter, please call me at 850/921-9523 or Michael P. Halpin at 850-921-9519.

Sincerely,

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/mph

cc: K. F. Kosky, Golder Associates
Len Kozlov, DEP CD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS



Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

April 26, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Health and Safety-
c/o GPU International, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Request for Additional Information
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

On April 21, 2000 the Department received your application for a modification to the air construction permit for Lake Cogeneration Limited. This request is to change the CO limit (from what is represented in the table below) to a facility-wide limit of 42 ppmvd (at 15% O₂) with an annual CO emissions cap of 350 TPY. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

Lbs / Hr @ 59°F	Lbs / Hr @ 51°F	Basis	Operating Mode
54.6	56.0	28 ppmvd	CT firing Natural Gas
33.0	34.5	18 ppmvd	CT firing #2 Fuel Oil
36.0	36.0	0.2 lb/MMBtu	DB firing Natural Gas
90.6	92.0		CT + DB firing Natural Gas
TPY = 350.3			

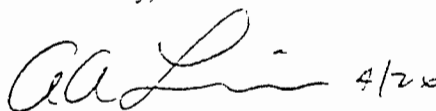
1. Please update the 1991 evaluation of a CO catalyst installation for each unit. That evaluation resulted in a removal cost of \$2700 per ton, which seems high, based upon a recent EPA memorandum dated December 30, 1999.
2. Without the following, the Department is unwilling to accept the statistical analysis provided with the application. The following questions arise as a result of the statistical data and analysis provided:
 - A. 17 data points appear to be represented as the total population for each chart, apparently representing tests from 4 or more sites. The number of data points appears inadequate to draw conclusions, or to ensure that the data is even normally distributed. Please consider using at least 30 (recent) data points and performing a test to ensure that the data is normally distributed at a 98% confidence level. Data should be quality checked (i.e. the test method as well as other controllable factors should be as similar as practical) and data which has special or assignable causes, as well as statistical outliers should be eliminated.
 - B. Unless it can be statistically proven at a high confidence level that the data sets at each site are from the same population (and therefore can be intermingled), all data should be from only the Lake Cogen. site. This is necessary to eliminate any site-to-site variability, which may be the result of differences in permit limits, operation/maintenance practices, fuel type usage, combustor tuning, etc. In the event that the data sets can be statistically proven to represent the same population, please provide that analysis.

"More Protection, Less Process"

3. Please provide the most recent two years worth of historical CO emissions. If this data is not considered to be representative, provide CO emissions for every year of post-construction operation, indicating which years are deemed to be representative as well as the accompanying rationale. The Department intends to review past actual operation with proposed future operation as part of this action.
4. Please indicate whether any other (additional) means are available to obtain real offsetting reductions in CO emissions from the facility as a whole.
5. The Department will likely require a CO CEMS unless the permittee can adequately show that it is impractical for this installation.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Material changes to the application should also be accompanied by a new certification statement by the authorized representative or responsible official. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call Mike Halpin at 850/921-9530.

Sincerely,

Handwritten signature of A. A. Linero, dated 4/20.

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/jk

cc: Gregg Worley, EPA
John Bunyak, NPS
Len Kozlov, DEP CD
Ken Kosky, Golder Associates, Inc.

Z 341 355 273

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail (See reverse)

Sent to		Thomas Grace
Street & Number		Lake Cosen
Post Office, State, & ZIP Code		Paroippamy NJ
Postage	\$	
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt Showing to Whom & Date Delivered		
Return Receipt Showing to Whom, Date, & Addressee's Address		
TOTAL Postage & Fees	\$	
Postmark or Date		4-26-00
		0694801-004-AC
		PSD-F1-176A

PS Form 3800, April 1995

Fold at line over top of envelope to the right of the return address

SENDER: CON

SECTION ON DELIVERY

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1 Article Addressed to:

Mr. Thomas A. Grace
Director, Env. Health
& Safety
One Upper Pond Rd
Paroippamy, NJ
07054

2 Article Number (Copy from service label)

A. Received by (Please Print Clearly)

B. Date of Delivery

5-7

C. Signature

X Johnson

☐ Agent

☐ Addressee

D. Is delivery address different from item 1?

☐ Yes

If YES, enter delivery address below:

☐ No

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

Z 341 355 273

UNITED STATES POSTAL SERVICE



REC'D
MAY 8 2000
BUREAU OF AIR REGULATION

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation, NSRS
2600 Blair Stone Road, MS 5505
Tallahassee, Florida 32399-2400





Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

April 26, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thomas A. Grace
Director - Environmental Health and Safety-
c/o GPU International, Inc.
One Upper Pond Road
Parsippany, New Jersey 07054

Re: Request for Additional Information
DEP File No. 0694801-004-AC (PSD-FL-176A)
Modification of CO Emission Limitation for Lake Cogeneration Limited

Dear Mr. Grace:

On April 21, 2000 the Department received your application for a modification to the air construction permit for Lake Cogeneration Limited. This request is to change the CO limit (from what is represented in the table below) to a facility-wide limit of 42 ppmvd (at 15% O₂) with an annual CO emissions cap of 350 TPY. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

Lbs / Hr @ 59°F	Lbs / Hr @ 51°F	Basis	Operating Mode
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33.0	34.5	18 ppmvd	CT firing #2 Fuel Oil
36.0	36.0	0.2 lb/MMBtu	DB firing Natural Gas
90.6	92.0		CT + DB firing Natural Gas
TPY = 350.3			

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2. Without the following, the Department is unwilling to accept the statistical analysis provided with the application. The following questions arise as a result of the statistical data and analysis provided:
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"More Protection, Less Process"

Mr. Thomas A. Grace
Request for Additional Information
Page 2 of 2
April 26, 1999

3. Please provide the most recent two years worth of historical CO emissions. If this data is not considered to be representative, provide CO emissions for every year of post-construction operation, indicating which years are deemed to be representative as well as the accompanying rationale. The Department intends to review past actual operation with proposed future operation as part of this action.
4. Please indicate whether any other (additional) means are available to obtain real offsetting reductions in CO emissions from the facility as a whole.
5. The Department will likely require a CO CEMS unless the permittee can adequately show that it is impractical for this installation.

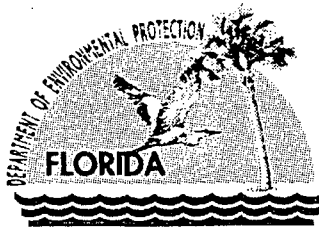
The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Material changes to the application should also be accompanied by a new certification statement by the authorized representative or responsible official. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call Mike Halpin at 850/921-9530.

Sincerely,

 4/20
A. A. Linero, P.E. Administrator
New Source Review Section

AAL/jk

cc: Gregg Worley, EPA
John Bunyak, NPS
Len Kozlov, DEP CD
Ken Kosky, Golder Associates, Inc.



Jeb Bush
Governor

Department of Environmental Protection

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

April 26, 2000

David B. Struhs
Secretary

Mr. Gregg Worley, Chief
Air, Radiation Technology Branch
Preconstruction/HAP Section
U.S. EPA – Region IV
61 Forsyth Street
Atlanta, Georgia 30303

Re: Lake Cogeneration Permit Amendment Request

Dear Mr. Worley:

Enclosed for your review and comment is an application for the above-mentioned project. It consists of a request to modify the permitted CO limit on both LM-6000 CT's from their current permitted emissions (which are represented in the table below) to a facility-wide limit of 42 ppmvd (at 15% O₂) with an annual CO emissions cap of 350 TPY. The applicant indicates that they are willing to accept a reduction in annual heat input in order to ensure that the annual CO tonnage (potential to emit) does not increase.

Lbs / Hr @ 59°F	Lbs / Hr @ 51°F	Basis	Operating Mode
54.6	56.0	28 ppmvd	CT firing Natural Gas
33.0	34.5	18 ppmvd	CT firing #2 Fuel Oil
36.0	36.0	0.2 lb/MMBtu	DB firing Natural Gas
90.6	92.0		CT + DB firing Natural Gas
TPY = 350.3			

Your comments can be forwarded to my attention at the letterhead address or faxed to me at (850) 922-6979. If you have any questions, please contact Mike Halpin at (850) 921-9530.

Sincerely,

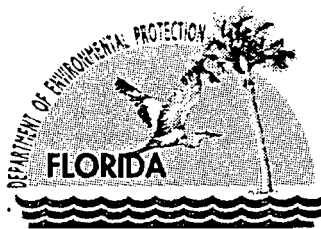
A. A. Linero, P.E. Administrator
New Source Review Section

AAL/mph/kt

Enclosures

"More Protection, Less Process"

Printed on recycled paper.



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
April 26, 2000

David B. Struhs
Secretary

Mr. John Bunyak, Chief
Policy, Planning & Permit Review Branch
NPS-Air Quality Division
Post Office Box 25287
Denver, CO 80225

Re: Lake Cogeneration Permit Amendment Request

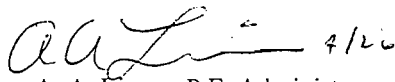
Dear Mr. Bunyak:

Enclosed for your review and comment is an application for the above-mentioned project. It consists of a request to modify the permitted CO limit on both LM-6000 CT's from their current permitted emissions (which are represented in the table below) to a facility-wide limit of 42 ppmvd (at 15% O₂) with an annual CO emissions cap of 350 TPY. The applicant indicates that they are willing to accept a reduction in annual heat input in order to ensure that the annual CO tonnage (potential to emit) does not increase.

Lbs / Hr @ 59°F	Lbs / Hr @ 51°F	Basis	Operating Mode
54.6	56.0	28 ppmvd	CT firing Natural Gas
33.0	34.5	18 ppmvd	CT firing #2 Fuel Oil
36.0	36.0	0.2 lb/MMBtu	DB firing Natural Gas
90.6	92.0		CT + DB firing Natural Gas
TPY = 350.3			

Your comments can be forwarded to my attention at the letterhead address or faxed to me at (850) 922-6979. If you have any questions, please contact Mike Halpin at (850) 921-9530.

Sincerely,

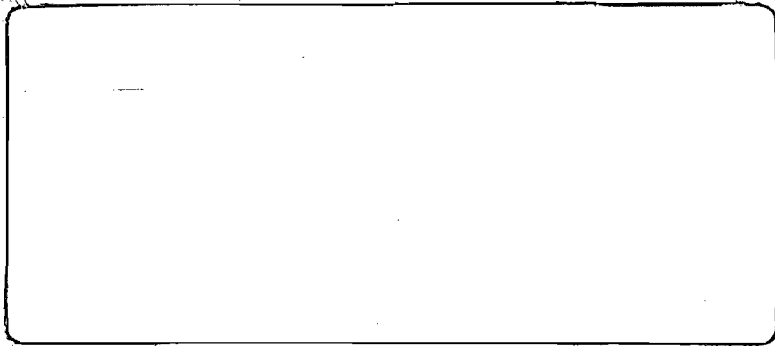

A. A. Linero, P.E. Administrator
New Source Review Section

AAL/mph/kt

Enclosures

"More Protection, Less Process"

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RECEIVED

APR 21 2000

BUREAU OF AIR REGULATION

**AIR PERMIT APPLICATION FOR
FOR
LAKE COGENERATION FACILITY
UMATILLA, FLORIDA**

**Prepared For:
Lake Cogeneration Limited
c/o GPU International, Inc.
Parsippany, NJ 07054**

**Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500**

**April 2000
0037524Y/F1**

**DISTRIBUTION:
6 Copies – Lake Cogeneration Limited
1 Copies – Golder Associates Inc.**

CC: M.H.
EPA
NPC
CD



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Lake Cogeneration Limited	
2. Site Name: Lake Cogeneration Facility	
3. Facility Identification Number: 0694801 [] Unknown	
4. Facility Location: Street Address or Other Locator: 39001 Golden Gem Drive City: Umatilla County: Lake Zip Code: 32784	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Application Contact

1. Name and Title of Application Contact: Thomas A. Grace, Director-Env., Health and Safety	
2. Application Contact Mailing Address: Lake Cogen L.P. Organization/Firm: c/o GPU International, Inc. Street Address: One Upper Pond Road City: Parsippany State: NJ Zip Code: 07054	
3. Application Contact Telephone Numbers: Telephone: (973) 263 - 6913 Fax: (973) 263 - 6848	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	April 21, 2000
2. Permit Number:	0694801-004-Ae
3. PSD Number (if applicable):	PSD-EI-177a
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- ☐ Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- ☐ Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- ☐ Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- ☒ Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: 0694801-002-AV

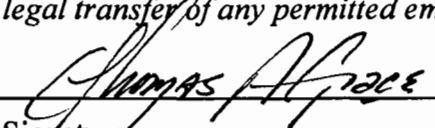
Reason for revision: Modification of CO Limit

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- ☐ Air construction permit to construct or modify one or more emissions units.
- ☐ Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- ☐ Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Thomas A. Grace, Director – Env., Health and Safety
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Lake Cogen L.P., c/o GPU International, Inc. Street Address: One Upper Pond Road City: Parsippany State: NJ Zip Code: 07054
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (973) 263 - 6913 Fax: (973) 263 - 6848
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [X], if so) or the responsible official (check here [], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>  Signature <u>4.21.00</u> Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address: Organization/Firm: Golder Associates Inc. Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653-1500
3. Professional Engineer Telephone Numbers: Telephone: (352) 336 - 5600 Fax: (352) 336 - 6603

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

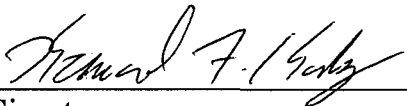
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

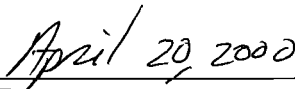
If the purpose of this application is to obtain a Title V source air operation permit (check here [], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.



Signature



Date

(seal)

Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
--	Combustion Turbines and Duct Burners		

Application Processing Fee

Check one: ☐ Attached - Amount: \$: _____ ☒ Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

N/A

2. Projected or Actual Date of Commencement of Construction: N/A

3. Projected Date of Completion of Construction: N/A

Application Comment

Facility wide CO limit of 42 ppm requested. Refer to Attachment A-1.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 434 North (km): 3198.8			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 28 / 55 / 02 Longitude (DD/MM/SS): 81 / 40 / 37			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4931
7. Facility Comment (limit to 500 characters): The Lake Cogeneration Facility consists of two combustion turbines with duct burners (CT and DB) that exhaust through Heat Recovery Steam Generator stacks. The CTs are natural gas and distillate oil fired units. This application proposes a CO emission limit for CT and DB operation of 42 ppm.			

Facility Contact

1. Name and Title of Facility Contact: Jim Miller – Plant Manager			
2. Facility Contact Mailing Address: Organization/Firm: Lake Cogeneration Limited Street Address: 39001 Golden Gem Drive City: Umatilla State: FL Zip Code: 32784			
3. Facility Contact Telephone Numbers: Telephone: (352) 669 - 3288 Fax: (352) 669 - 3188			

Facility Regulatory Classifications**Check all that apply:**

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	

List of Applicable Regulations

B. FACILITY POLLUTANTS

List of Pollutants Emitted

[illegible]

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Facility Plot Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Process Flow Diagram(s): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
6. Supplemental Information for Construction Permit Application: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7. Supplemental Requirements Comment: Supplemental information previously submitted in original Title V permit application.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input checked="" type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)			
<input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.			
<input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one)			
<input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.			
<input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):			
GE LM 6000 Combustion Turbines with HRSG and Duct Burners			
4. Emissions Unit Identification Number:		<input type="checkbox"/> No ID <input checked="" type="checkbox"/> ID Unknown	
ID:			
5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	1 JUL 93	49	<input type="checkbox"/>
9. Emissions Unit Comment: (Limit to 500 Characters)			
The CT gases exhaust through a heat recovery steam generator (HRSG). The HRSG services a steam generator rated at 26.5 MW and furnishes steam to an orange processing facility. The nameplate rating of the combustion turbine is 42 MW @ 51°F.			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Water injection to control NO_x emissions

2. Control Device or Method Code(s): **28**

Emissions Unit Details

1. Package Unit:	
Manufacturer: General Electric	Model Number: LM 6000
2. Generator Nameplate Rating: 42 MW	
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**(Regulated Emissions Units -****Emissions-Limited and Preconstruction Review Pollutants Only)****Potential/Fugitive Emissions**

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: 120 lb/hour 350.3 tons/year	4. Synthetically Limited? <input type="checkbox"/>
5. Range of Estimated Fugitive Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 _____ to _____ tons/year	
6. Emission Factor: 42 ppmvd Reference: Permit Limit	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): Potential emissions based on the proposed permit limit of 42 ppmvd.	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Hourly potential emissions based on CTs/DB @ 51°F operating conditions on natural gas; annual based on proposed permit limit.	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 42 ppmvd	4. Equivalent Allowable Emissions: 84 lb/hour 350.3 tons/year
5. Method of Compliance (limit to 60 characters): Renewal compliance test; EPA Method 10	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing; CT Units 1 and 2. Basis of limit is 42 ppmvd.	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: CO	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? <input type="checkbox"/>
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 42 ppmvd	4. Equivalent Allowable Emissions: 120 lb/hour 350.3 tons/year
5. Method of Compliance (limit to 60 characters): Renewal compliance test, EPA Method 10	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Natural gas firing for CTs and DB; See Attachment A-1	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)**Supplemental Requirements**

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Supplemental information previously submitted in original Title V permit application.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

ATTACHMENT A-1

**Lake Cogeneration Limited Partnership
Lake Cogeneration Facility
Umatilla, Florida**

A.1 Introduction

The Lake Cogeneration Facility (ID No. 0694801) consists of two combustion turbines (42 MW each) and two heat recovery steam generators with duct burners. Over the last several years, the facility has observed variability in the emissions of CO that has exceed the CO emission limit (see Attachment A-2 for background information). The existing carbon monoxide (CO) limit, pursuant to Florida Air Operating Permit No. 0694801-002-AV, are provided below:

Table 1 Current Allowable CO Limits

Source	Fuel	lb/hr (59°F)	TPY (59°F)	lb/hr (51°F)	TPY (51°F)
CT	NG	54.6	350.3	56.0	350.3
CT	DFO	33.0		34.5	
DB	NG	36.0		36.0	
CT&DB	NG	90.6		92.0	

CT - combustion turbine, DB - duct burner, NG - natural gas, DFO - diesel fuel oil

Each of the emission units including the duct burners is allowed to operate 8,760 hours per year. The maximum heat input based on (LHV), while burning natural gas is limited to 423 mmBtu/hr/ per CT at 51°F. Each of the two 90 mmBtu/hr duct burners is limited to a heat input of 525,000 mmBtu/year/HRSG-duct burner.

The CO emission limit, based on a concentration of 28 ppmvd, was revised after the initial compliance tests were performed on the facility. This was done to meet the requirements of the Air Construction Permit and PSD approval (AC35-196459; PSD-FL-176). The initial CO emission limit was based 42 ppmvd and based on information available from the manufacturer, which was uncertain as best. As a result, the Department established an emission limit but required a reevaluation after the initial performance tests were completed. Indeed, the Department concluded in the determination of BACT for CO: "... it appears that the limit proposed by the applicant is reasonable pending actual testing. If lower limits are obtained during testing, the operation permit should reflect a lower limit" (page 5 of BACT Determination). Further, the BACT determination concludes: "Therefore, the Department is willing to accept combustion control for CO control when firing natural gas or distillate oil. However, distillate oil firing will be limited to 240 hours per year. Also, due to the lack of operational experience with the LM 6000 and the uncertainty of the CO emissions, the permittee shall install a duct module suitable for future installation of an oxidation catalyst."

After the initial performance on both Lake Cogeneration and Pasco Cogeneration Facilities and using test data from 4 LM 6000's, the proposed basis for the CO emission limit was revised to 28 ppmvd. This incorporated a 25 percent margin from the initial compliance tests from these facilities. However, this margin was based on a new and clean condition of the turbines and did not account for the variability in turbine performance that was subsequently observed. Given the test data over the last several years, the facility requests the Department to revise the current CO basis for allowable emission limits back to 42 ppmvd as originally approved in the Air Construction Permit and PSD approval. However, the facility proposes to maintain the maximum potential emissions at 350.3 TPY, which was based on the 28 ppmvd CO concentration basis. The annual CO limit would be

based on total heat input to the facility with annual CO emissions recorded based on daily heat input in each CT and duct burner system.

A.2 Methodology for Revised CO Emissions Limit and Facility Cap

The basis of the revised CO limit is proposed as 42 ppmvd. The maximum CO emission limits for the turbine are proposed as 81.9 and 84.0 lb/hr for turbine inlet temperatures of 59 and 51 °F, respectively. These were developed by a ratio of the existing basis of the CO emission limit and that proposed (e.g., 42 ppmvd/28 ppmvd x 54.6 lb/hr = 81.9 lb/hr).

The facility-wide, CO emission limit of 350.3 tons/year would be based on limiting the facility heat input but accounting for the differences in emissions from the turbine and the duct burner. It should be noted that the CO emission limits for the duct burner would not change. The annual heat input limit to that account for a potential emission of 350.3 tons/year is:

$$\text{Facility-wide Heat Input Limit} = 7,055,640 \text{ mmBtu/yr} - 2.0143 \times (\text{Duct burner mmBtu/yr})$$

The above facility cap was derived from the conditions of the current facility Title V operating permit. Combustion turbine heat input, based on a maximum value of 423 mmBtu/hr per CT multiplied by a factor of two (CT's) and an operating limit of 8760 hours per year, yields 7,410,960 mmBtu/yr. Based on limiting the annual emissions from the CT based on the proposed maximum CO limit of 42 ppm, the maximum annual heat input from the CT's would be:

$$\text{CT heat input (@ 42 ppm)} = 7,410,960 \text{ MMBtu/yr} \times (28 \text{ ppm}/42 \text{ ppm}) = 4,940,640 \text{ mmBtu/yr}$$

However, the DBs also contribute to the CO emissions and are authorized to operate with up to 1,050,000 mmBtu/yr. The emission rate basis for the DBs are 0.2 lb/mmBtu and contribute 105 tons/year of CO to the 350.3 tons/year proposed emissions cap. (1,050,000 mmBtu/year x 0.2 lb/mmBtu x ton/2,000 lb)

To allow flexibility in the operation of the facility, it is proposed that the heat input limit maximize the use of the CTs, while also accounting for the emissions of the DBs. The heat input for the DBs can be made equivalent, on an emissions basis, to the turbine based on the emission rates in lb/mmBtu. The emission rate of the CTs at 42 ppmvd would be 0.0993 lb/mmBtu [84 lb/hr/(2 x 423 mmBtu/hr)]. The ratio of the CO emissions rate for the DBs and CTs is 2.0143 (0.2 lb/mmBtu for DBs and 0.0993 lb/mmBtu for the CTs). As seen from this ratio, the DBs have potential CO emissions slightly over two times that of the proposed potential CO emissions from the CTs.

If the DBs do not operate, the combustion turbine heat input equivalent to the potential CO emissions from the duct burner would be

$$\text{Equivalent CT heat input} = 1,050,000 \text{ mmBtu} \times 2.0143 = 2,115,000 \text{ mmBtu/yr}$$

At the CT emission rate of 0.0993 lb/mmBtu, the potential CO emissions are the same as that for the DBs (2,115,000 mmBtu/yr x 0.0993 lb/mmBtu x ton/2,000 = 105 tons/year). The maximum heat input for the entire facility with no operation of the DBs would be:

$$\begin{aligned} \text{Total heat input for CTs with no DBs} &= 4,940,640 \text{ mmBtu/yr} + \\ &2,115,000 \text{ mmBtu/yr} = 7,055,640 \text{ mmBtu/yr} \end{aligned}$$

In order to account for the use of the DBs and their higher emission rate, the amount of heat input used by the DBs must be subtracted but also must be adjusted by the ratio of the DB to CT emission rates as noted above. This would account for the higher potential CO emission rate of the DBs and result in the proposed heat input cap, which would limit potential CO emissions to 350.3 tons/year.

$$\begin{aligned} \text{Proposed Heat Input Limit (mmBtu/hr)} &= 7,055,640 \text{ mmBtu/yr} - \\ &2.0143 \times (\text{Duct burner mmBtu/yr}) \end{aligned}$$

A.3 Proposed Permit Limit Revision

The proposed facility wide permit limit for CO will continue to be 350.3 tons/yr. The basis for the CO limit would increase from 28 ppmvd to 42 ppmvd and based on this ratio (42/28) the CO pound per hour rates will be revised as shown in bold below.

Table 2 Proposed Allowable CO Emission Limits

Source	Fuel	lb/hr (59°F)	TPY (59°F)	lb/hr (51°F)	TPY (51°F)
CT	NG	81.9	350.3	84.0	350.3
CT	DFO	33.0		34.5	
DB	NG	36.0		36.0	
CT&DB	NG	117.9		120.0	

CT - combustion turbine, DB - duct burner, NG - natural gas, DFO - diesel fuel oil

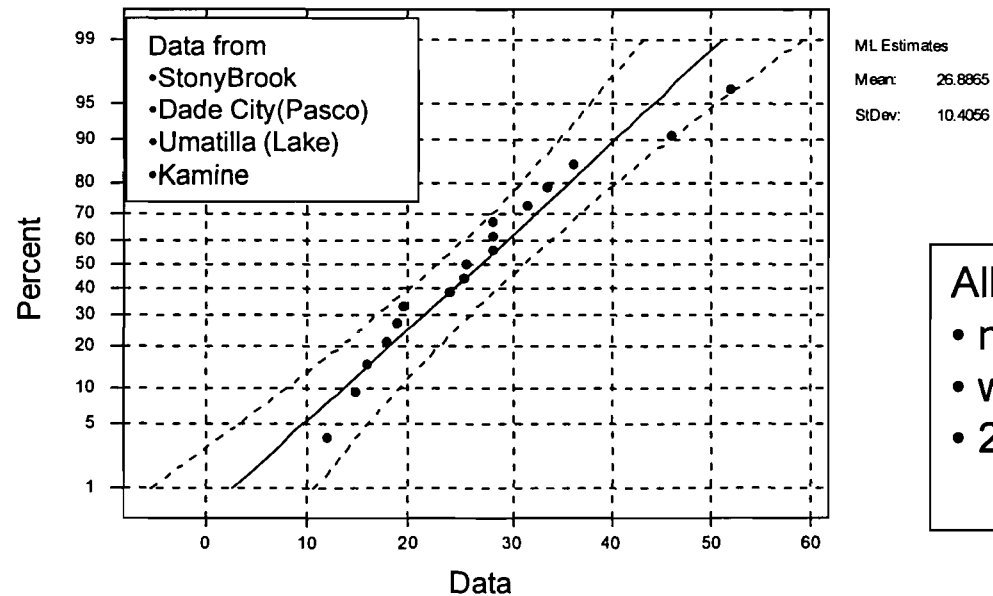
A facility-cap of heat input is proposed in the following equation:

$$\begin{aligned} \text{Proposed Heat Input Limit (mmBtu/hr)} &= 7,055,640 \text{ mmBtu/yr} - \\ &2.0143 \times (\text{Duct Burner mmBtu/yr}) \end{aligned}$$

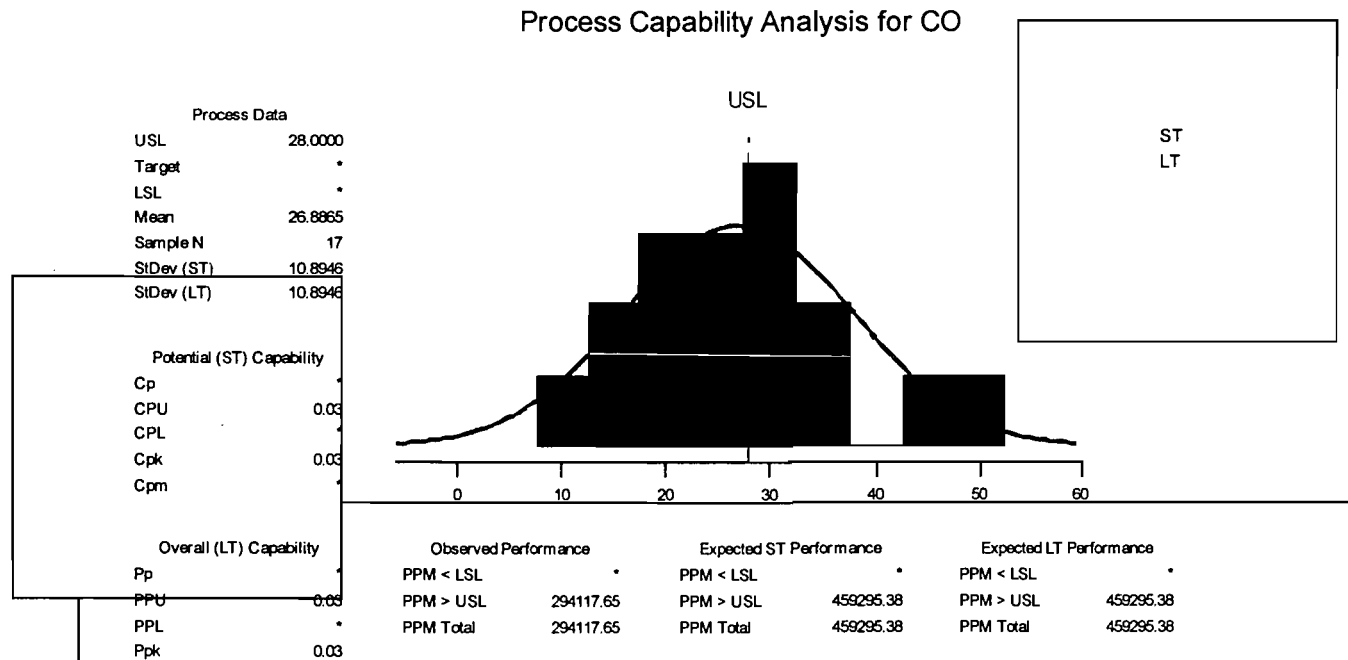
ATTACHMENT A-2

LM6000 Gas Water CO Emissions

Normal Probability Plot for CO



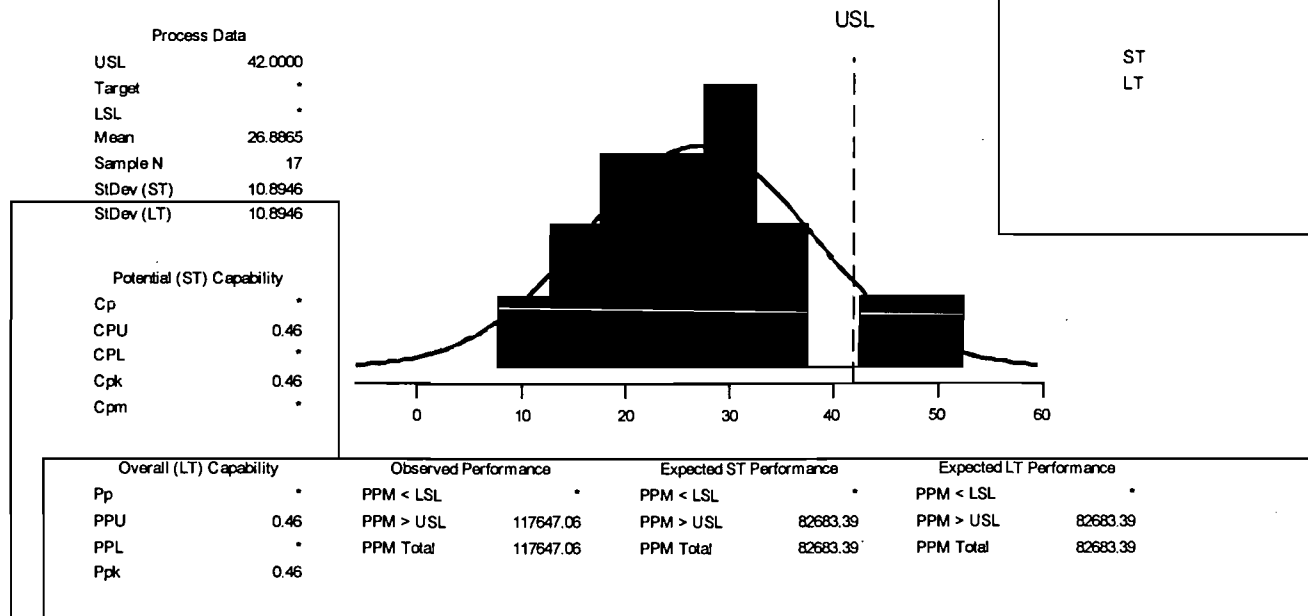
All Combustors (28 ppm permit)



~45% of new installations will exceed 28 ppm CO

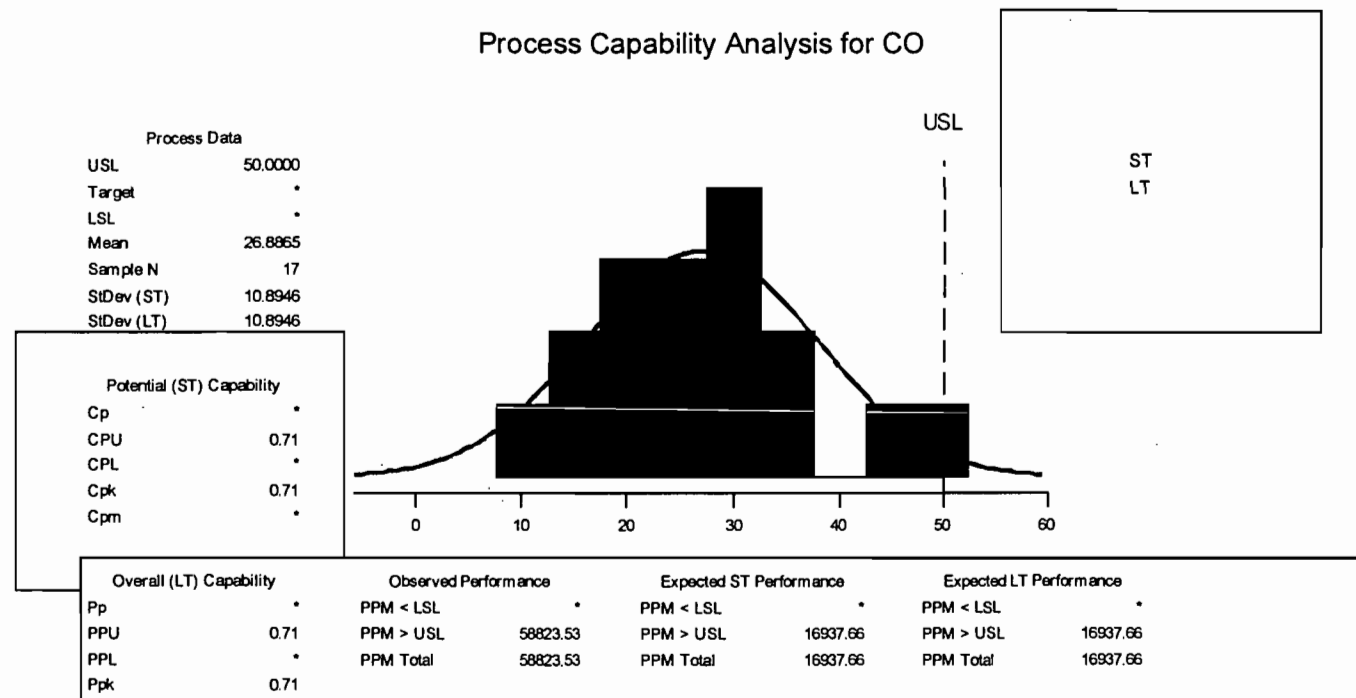
All Combustors (42 ppm permit)

Process Capability Analysis for CO



~8% of new installations will exceed 42 ppm CO

All Combustors (50 ppm permit)



~1.6 % of new installations will exceed 50 ppm CO

Statistical Evaluation

- Obtained data for LM6000 fleet at 6 sites
- Removed data in which there were significant special causes for high emissions
- Resulting data reflects product characteristics
- Data shows 45% of future installations will result in exceedances beyond 28 ppm limit
- At 42 ppm only 8 % of future installations will result in exceedances
- At 50 ppm only 1.6 % of future installations would exceed limit
- Site still needs to maintain fuel system health and have a robust fuel nozzle management program



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Department of
Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL
P 248 041 685

Nations Bank of Florida, National Association
600 Peachtree Street, NE
Suite 900
Atlanta, Georgia 30308

Attention: L. Collins Proctor, Trust Officer

Lake County - AP
Lake Cogen Facility
Combined Cycle Gas Turbine Cogeneration Facility

Dear Mr. Proctor:

Enclosed is a revised Permit Number AO35-248140 to operate the above referenced source, issued pursuant to Section(s) 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding(hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period constitutes a waiver of any right such person may have to request an administrative determination(hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information: (a) the name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) a statement of how and when each petitioner received notice of the Department's action or proposed action; (c) a statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) a statement of the material facts disputed by petitioner, if any; (e) a statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) a statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action and (g) a statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application, have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above, and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition

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request a hearing under Section 120.57, F.S. , and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for extension of time, this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

cm 
William M. Bostwick, Jr., P.E.
Acting District Director

DATE:

3/30/95

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52 (11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk

3/30/95
Date

WMB/hhj

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on 3/30/45 to the listed persons by, D. Jones.



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Department of
Environmental Protection

Lawton Chiles
Governor

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Virginia B. Wetherell
Secretary

Permittee:
Nations Bank of Florida, National Association
600 Peachtree Street, NE
Atlanta, Georgia 30308

Attention: L. Collins Proctor, Trust Officer

Permit Number: AO35-248140
Date of Issue: 3/30/95
Expiration Date: November 4,
1999
County: Lake
Latitude/Longitude:
28° 55' 02"N / 81° 40' 37"W
UTM: 17-434.0 KmE; 3198.8 KmN
Project: Combined Cycle Gas
Turbine Cogeneration Facility

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 62-210, 296, and 297. 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:

The permittee can operate a Combined Cycle Gas Turbine Cogeneration Facility. The facility consists of two nominal 42 megawatt (MW) combustion turbines, with exhaust through heat recovery steam generators (HRSG) which are used to power a nominal 26.5 MW steam turbine. The facility utilizes natural gas as the primary fuel, with distillate oil as the emergency backup fuel. Nitrogen oxide emissions from this facility are controlled by water injection.

This emission unit is located adjacent to the Golden Gem Citrus Processing Plant, at the intersection of State Road 19 and Golden Gem Road in Umatilla, Lake County, Florida.

General Conditions are attached to be distributed to the permittee only.

GEN. CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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 and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (a) Have access to and copy any records that must be kept under conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (a) A description of and cause of noncompliance; and
 - (b) The period of noncompliance, including 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.

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

RENE CONDITIONS:

- Page 3 of 12

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Permittee: Nations Bank of FL,
National Association
Attention: L. Collins Proctor,
Trust Officer

I.D.
Permit Number: AO35-248140
Date Of Issue:
Expiration Date: November 4, 1999
County: Lake

SPECIFIC CONDITIONS

OPERATING CONDITIONS

1. This source is permitted to operate continuously (8,760 hours per year) [Pursuant to permit application].
2. This source is permitted to use natural gas as the primary fuel and distillate oil as the emergency backup fuel (limited as shown in Specific Condition No. 3 below) [Pursuant to permit application].
3. The permitted materials and utilization rates for this source are as follows [Pursuant to 3/10/94 amendment to AC35-196459]:

Maximum distillate fuel oil consumption shall not exceed either of the following limitations - 2,921 gal/hr/CT; 701,050 gal/yr/CT

Maximum annual firing using distillate fuel oil shall not exceed an equivalent of 10 days (240 hours) per year at full load.

Maximum sulfur (S) content in the oil shall not exceed 0.1 percent by weight.

Maximum heat input based on the lower heating value (LHV) while burning natural gas, shall not exceed 423 MMBtu/hr/CT at 51°F ~~or 406 MMBtu/hr/CT when corrected to 150 conditions~~. The maximum heat input, based on the LHV while burning distillate fuel oil, shall not exceed 424 MMBtu/hr/CT at 51°F ~~or 406 MMBtu/hr/CT when corrected to 150 conditions~~.

Duct firing shall be limited to natural gas firing only, with a maximum heat input of 90 MMBtu/hr based on the higher heating value (HHV) of approximately 1054.5 Btu/ft³.

Duct firing shall be limited to 525,000 MMBtu/year/HRSG-duct burner.

4. Any change in the method of operation, equipment or operating hours which affects air emissions shall be submitted to the Department's Bureau of Air Regulation and the Central Florida District office for prior approval.
5. Any other operating parameters established during compliance testing and/or inspections, that will ensure the proper operation of this facility, are considered part of this operating permit. Said operating parameters include, but are not limited to: Fuel flow rate, heat input rate and water to fuel ratio.
6. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor[Rule 62-296.320(2), F.A.C.].

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7. This source must be properly operated and maintained [Rule 62-210.300(2), F.A.C.]. No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly [Rule 62-210.650, F.A.C.].

EMISSION LIMITS

8. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1A, which is attached to, and is a part of, this permit [Pursuant to 3/10/94 amendment to AC35-196459].
9. Visible emissions shall never exceed 20 percent opacity, and the CT shall not exceed 10 percent opacity during full load except as provided in Rule 62-210.700, F.A.C.

COMPLIANCE DETERMINATION

10. Compliance with the NO_x , SO_2 , CO and visible emission standards shall be determined by the following reference methods as described in 40 CFR 60, Appendix A (July 1, 1990) and adopted by reference in Rule 62-297, F.A.C.
- a. Method 9 - Visible Emissions
 - b. Method 10 - Determination of the Carbon Monoxide emissions from Stationary Sources
 - c. Method 20 - Determination of Nitrogen Oxides, Sulfur Dioxide and Diluent emissions from Stationary Gas Turbines
 - d. Method 25A - Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer

Compliance with the total volatile organic compound emission limits will be assumed, provided that the CO allowable emission rate is achieved; specific VOC compliance testing is not required.

Compliance tests shall be conducted on an annual basis on or within 60 days prior to July 15 for each parameter marked (A) in the following table:

} - short term
variance
Requested
pending
Resolution
of permit
Request
deletion of
VOC's

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Permittee: Nations Bank of FL,
National Association
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Trust Officer

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PARAMETER	TEST METHOD
NO _x (A)	Method 20* with results in pounds per million Btu. Stack- emissions will be reported with the ISO correction factor in Specific Condition 17 of this permit. Temperature and humidity of the air leaving the boiler will be substituted for actual temperature and humidity (standard inlet air) in the ISO correction equation.
SO ₂ (A)	SO ₂ emission rate will be calculated using fuel analysis data. Gas analysis will be done using ASTM D1072-80, D3031-81, D4084-82 or D3246 to analyze for sulfur content of gaseous fuels.
VOC (A)	Method 25A. VOC will be tested simultaneously with NO_x, CO and VE at maximum load. Not required if CO limit is met.
CO (A)	Method 10. CO will be tested simultaneously with NO _x , VOC and VE at maximum load. Tests will be conducted for CT only, and CT plus DB. CO test will be three test runs, with each test run to be a minimum of one hour as required by 62-297.310(1) and 62-297.330(1)(a)
Metal Analysis	Metal Analysis will be accepted from the August 1993 test.
VE (A)	Method 9. Two, one-hour VE tests while firing gas at maximum load. One hour with DB on, one hour with DB off. VE readings will be taken simultaneously with tests for NO _x , CO and VOC.

Delete

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Trust Officer

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PARAMETER	METHOD OF DETERMINATION
Fuel Type	Natural Gas.
Btu Per Pound of Fuel (A)	Fuel Analysis both low and high. Btu input for CT calculated using lower heating value. Btu input for DB calculated using higher heating value.
CO ₂ and O ₂ (A)	Method 3/3A/20 to be used to measure oxygen for all test conditions.
Ambient temperature, pressure and humidity (A)	Temperature and humidity of the air leaving the chiller (turbine inlet air) will be recorded by the stack test team. This is in addition to the data recorded by the computer. Pressure will be measured as ambient pressure.
30, 50, 75 and 100% of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load, as referenced in 40 CFR 60.335 (c) (2), Subpart GG	Peak load based on Btu input will be established and megawatts determined on the day of the test. Multiple load testing for NO_x will be performed in accordance with 40 CFR 60.335 (c) (2).

Delete

* The emission test sampling points will be selected in accordance with 6.1.2.4 of Method 20, which states - Select the eight sampling points at which the lowest O₂ concentrations or highest CO₂ concentrations were obtained - . If the difference between the highest and the lowest measured oxygen concentrations in the stack is less than 0.4% oxygen by volume, it may be assumed that stratification does not exist.

~~11. During performance tests to determine compliance with the proposed standard, measured NO_x emission at 15% oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor, as found in 40 CFR 60.335 (1), NSPS Subpart GG:~~

Delete

$$NO_x = (NO_{x\text{ obs}}) \left(\frac{P_{\text{amb}}}{P_{\text{obs}}} \right)^{0.5} e^{15 \left(H_{\text{obs}} - 0.00633 \right) \left(\frac{298}{T_{\text{amb}}} \right)^{1.53}}$$

where,

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~~NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions~~

~~(NO_x obs) = Measured NO_x emission at 15 percent oxygen, ppmv~~

~~P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure~~

~~P_{obs} = Reference combustor inlet absolute pressure at test ambient pressure~~

~~H_{obs} = Specific humidity of ambient air at test (turbine inlet air = ambient air)~~

~~e = Transcendental constant (2.718)~~

~~T_{amb} = Temperature of ambient air at test (turbine inlet air = ambient air).~~

Delete

12. The permittee shall notify the Central District office of the Department of Environmental Protection, in writing, at least 15 days prior to the date on which each formal compliance test is to begin. Said notification shall include the date, time and place of each such test, as well as the name of the contact person who will be responsible for coordinating and having such tests conducted for the owner. The Department may waive the 15 day notice requirement on a case by case basis [Rule 62-297.340(1)(i), F.A.C.]. ~~The permittee shall also at that time schedule a pre test meeting with the Central District office to review the compliance test procedures required by this permit and 40 CFR 60 Code of Regulations.~~

Delete

13. A copy of the compliance test results shall be submitted to the Department's Central District office within 45 days after the last test run is complete. The test run should provide the actual heat input rate, and at least all of the information listed in Rule 62-297.570(3), F.A.C. Failure to submit any of the above information may invalidate a test. [Rule 62-297.570 and 62-4.070(3), F.A.C.] 16. Testing of emissions shall be conducted with the source operating at 90% to 100% of rated capacity. The source may be tested at less than 90% of rated capacity; however subsequent source operation is limited to 110% of the tested load until a new test is conducted and approved by the Department in writing. Once the source is so limited, operation at higher capacities, not to exceed rated capacity, is allowed for a cumulative total of no more than 15 successive calendar days for purposes of additional compliance testing to regain permitted capacity, with prior notification to the Department [Rule 62-4.070(3), F.A.C.]
14. The stack sampling facility must comply with Rule 62-297.345, F.A.C., regarding minimum requirements that include but are not limited to: location of sampling ports, work platform area hand rails and toe rails, caged ladder or fall arresters, access and electrical power.

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National Association
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15. A continuous monitoring system shall be utilized to monitor and record the water and fuel consumption on each unit, as well as the ratio of water to fuel being fired in each unit. Water injection shall be utilized for NO_x control. The water to fuel ratios at which annual compliance was achieved, shall be incorporated into this permit and shall be continuously monitored. The system shall meet the requirements of 40 CFR Part 60, Subpart GG.

The permittee shall provide the Central District office with the model number of the continuous monitoring system within 30 days of the date of issue of this operating permit.

16. Combustion control shall be utilized for CO control. The permittee shall leave a space suitable for installation of an oxidation catalyst [Pursuant to 3/10/94 Amendment to AC35-196459].
17. To determine compliance with the capacity factor condition for oil firing, the permittee shall maintain daily records of fuel usage. All records shall be maintained for a minimum of two years after the date of each record, and shall be made available to authorized representatives of the Department upon request.
18. Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment as required in 40 CFR 60 Subpart GG. These records shall be kept by the company for at least two years, and shall be made available for inspection by authorized representatives of the Department.
19. Excess emissions resulting from startup or shutdown are be permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized. Excess emissions resulting from malfunction are permitted provided that best operational practices to minimize emissions are adhered to, and the duration of excess emissions is minimized, but in no case exceeds two hours in any 24-hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction, are prohibited [Rule 62-210.700, F.A.C.].

In the event that the permittee is temporarily unable to comply with any of the conditions of the permit, the permittee shall immediately notify the Department's Central District Office. Notification shall be conducted in accordance with General Condition (8) of this permit. In case of excess emissions resulting from malfunctions, a full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department [Rules 62-210.700(6) and 62-4.130, F.A.C.].

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National Association
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The permittee shall submit, to the Department, a written report of emissions in excess of the emission limiting standard as set forth in Rule 62-296.405(1)(a), F.A.C. for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the permittee of the legal liability for violations. All recorded data shall be maintained on file for a period of at least two years. The information supplied in this report consistent with the reporting requirements of 40 CFR 60.7. The report shall be submitted within 30 days following the end of the calendar quarter [Rules 62-297.500(2) and 62-4.070(3), F.A.C.].

RULE REQUIREMENTS

20. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, and Chapter 62-4, Florida Administrative Code.
21. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Dc, and Rule 62-296.800(a), F.A.C., Standards of Performance for Stationary Gas Turbines, and Standards of Performance for Industrial, Commercial and Institutional Steam Generating Units.
22. This source shall comply with Rule 62-297, F.A.C., Stationary Point Source Emission Test Procedures.
23. Pursuant to Rule 62-210.300, F.A.C., Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to, the following: sulfur, nitrogen content and lower heating value of the fuel being fired, fuel usage, hours of operation and air emissions. Annual reports shall be sent to the Department's Central District office. Each calendar year, on or before March 1, an Annual Operations Report, DEP Form 62-210.900(4) must be submitted for the preceding calendar year.
24. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapter 62-297 or any other requirements under federal, state or local law. Additional regulations may impact this facility at some future date. The permittee shall comply with any applicable future regulations when they become effective [Rule 62-210.300, F.A.C.].
25. The application to renew this operating permit shall be submitted to the Central District office of the Department of Environmental Protection at least 60 days prior to the expiration date of this permit [Rules 62-4.050(2) and 62-4.090(1), F.A.C.].

Table 1A. Lake Cogen Limited Allowable Emission mts

Pollutant	Source ^a	Fuel ^b	Basis of Limit	Allowable Emission Limits			
				at 59°F lbs/hr TPY	Maximum Allowable at 51°F ^(e) lbs/hr ^(c) TPY ^(d)		
NO _x	CT	NG	BACT: 25 ppmvd at 15% O ₂	82.7	391.6	85.5	404.7
	CT	DFO	BACT: 42 ppmvd at 15% O ₂	143.9		148.3	
	DB	NG	BACT: 0.1 lb/MMBtu	18.0		18.0	
	CT&DB	NG		100.7		103.5	
CO	CT	NG	BACT: 28 ppmvd	54.6	350.3	56.0	350.3
	CT	DFO	BACT: 18 ppmvd	33.0		34.5	
	DB	NG	BACT: 0.2 lb/MMBtu	36.0		36.0	
	CT&DB	NG		90.6		92.0	
PM/PM10	CT	NG	BACT: 0.0065 lb/MMBtu	5.0	27.0	5.0	27.0
	CT	DFO	BACT: 0.026 lb/MMBtu	20.0		20.0	
	DB	NG	BACT: 0.006 lb/MMBtu	2.6		2.6	
	CT&DB	NG		7.6		7.6	
SO ₂	CT	DFO	Estab. by Applicant 0.1% S	80.0	21.0	87.6	21.0
VOC	CT	NG	Established by Applicant	3.3	30.8	3.4	30.8
	CT	DFO	Established by Applicant	8.3		8.7	
	DB	NG	Established by Applicant	5.4		5.4	
	CT&DB	NG		8.7		8.8	
Mercury (Hg)	CT	DFO	Established by Applicant		0.0003	--	0.0003
Lead (Pb)	CT	DFO	Established by Applicant		0.0008	--	0.0008
Beryllium (Be)	CT	DFO	Established by Applicant		0.0002	--	0.0002
Sulfuric Acid Mist	CT	DFO	Established by Applicant		0.80	--	0.80

^a CT = 2 combustion turbines, DB = 2 duct burners

^b NG = natural gas, DFO = distillate fuel oil

^c ~~NO_x limits for 59°F are at 60% relative humidity (ISO conditions)~~

(c) ^d Compliance with the Maximum Allowable Emission Limits shall be demonstrated for CT limits and CT&DB limits.

(d) ^e The Maximum Allowable TPY of emissions, based on a worst case scenario, are the sum of the CT emissions while firing NG for 355 days, the CT emissions while firing DFO for 10 days, and DB emissions at the maximum heat input for the previous combinations of CT firing. The DB will only fire NG and only while the CT is firing NG.

(e) ^f These are the Maximum Allowable Emission Limits shall never be exceeded at any temperature and/or operating configuration.

Note: All temperatures cited in this table refer to turbine inlet temperatures.

Permittee: Nations Bank of FL,
National Association
Attention: L. Collins Proctor,
Trust Officer


I.D.
Permit Number: A035-248140
Date Of Issue:
Expiration Date: November 4, 1999
County: Lake

Best Available Copy

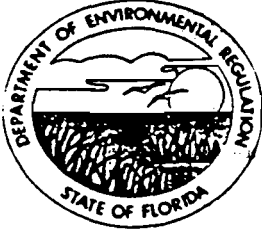
Permittee: Nations Bank of FL,
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STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

c m c 
William M. Bostwick, Jr., P.E.
Acting District Director

ISSUED: 3/30/95



Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Lake Cogen Limited
535 N. Ferncreek Ave.
Orlando, FL 32803

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993
County: Lake
Latitude/Longitude: 28°55'02"N
81°40'37"W
Project: 108-MW Combined Cycle
Gas Turbine Cogeneration
Facility

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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 drawings, 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 108 combined cycle gas turbine cogeneration facility to be located adjacent to the Golden Gem Citrus Processing Plant in Lake County, Florida. The UTM coordinates are 434.0 km East and 3,198.8 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Lake Cogen Limited's application dated May 1, 1991.
2. Department's sufficiency request dated May 31, 1991.
3. Letter from KBN Engineering and Applied Science, Inc., dated June 20, 1991, to supply additional information.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
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. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

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

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

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

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

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 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

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

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

GENERAL CONDITIONS:

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 dates 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 corrected promptly.

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from this facility shall not exceed the emission rates listed in Table 1.

2. Unless the Department has determined other concentrations are required to protect public health and safety, predicted acceptable ambient air concentrations (AAC) of the following pollutants shall not be exceeded:

Pollutant	Acceptable Ambient Concentrations		
	8-hrs	24-hrs	Annual
Beryllium	0.02	0.005	0.0004
Lead	1.5	0.36	0.09
Inorganic Mercury	NA	NA	0.3
Compounds, all forms of vapor, as Hg			

3. Visible emissions shall not exceed 10% opacity.

Operating Rates

4. This source is allowed to operate continuously (8,760 hours per year).

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

5. This source is allowed to use natural gas as the primary fuel and distillate oil as the emergency backup fuel (limited as shown in Specific Condition 6 below).

6. The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follows:

- Maximum distillate fuel oil consumption shall not exceed either of the following limitations: 2,921 gals/hr/CT; 701,050 gals/yr/CT.
- Maximum annual firing using fuel oil shall not exceed an equivalent of 10 days per year at full load.
- Maximum sulfur (S) content in the oil shall not exceed 0.1 percent by weight.
- Maximum heat input shall not exceed 384 MMBtu/hr/CT (gas) or 387 MMBtu/hr/CT (oil) at ISO conditions.
- Duct firing shall be limited to natural gas firing only with a maximum heat input of 225 MMBtu/hr.
- Duct firing shall be limited to 525,000 MMBtu/year/HRSG-duct burner, which is an equivalent to 3,500 hours at 150 MMBtu/hour.

7. Any change in the method of operation, equipment or operating hours shall be submitted to the DER's Bureau of Air Regulation at Central Florida District offices.

8. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

Compliance Determination

9. Initial (I) compliance tests shall be performed on each CT using both fuels. The stack test for each turbine shall be performed within 10 percent of the maximum heat rate input for the tested operating temperature. Annual (A) compliance tests shall be performed on each CT with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with the November 2, 1989, version of 40 CFR 60 Appendix A:

- a. 5 or 17 for PM (I, A, for oil only)
- b. 10 for CO (I)
- c. 9 for VE (I, A)
- d. 20 for NOx (I, A)

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PERMITTEE:
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Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

- e. trace elements of beryllium (Be) shall be tested (I, for oil only) using EMTIC Interim Test Method. As an alternative, Method 104 may be used; or Be may be determined from fuel sample analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.
- f. mercury (Hg) shall be tested using EPA Method 101 (40 CFR 61, Appendix B) (I, for oil only) or fuel sampling analysis using methods acceptable to the Department.

Other DER approved methods may be used for compliance testing after prior Departmental approval.

10. Method 5 or 17 must be used to determine the initial compliance status of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

11. Compliance with the SO₂ emission limit can also be determined by calculations based on fuel analysis using ASTM D2880-71 for the sulfur content of liquid fuels.

12. Compliance with the total volatile organic compound emission limits will be assumed, provided the CO allowable emission rate is achieved; specific VOC compliance testing is not required.

13. During performance tests,, to determine compliance with the proposed NO_x standard, measured NO_x emission at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_x \text{ obs}) \left(\frac{P_{ref}}{P_{obs}} \right)^{0.5} e^{19} (H_{obs} - 0.00635) \left(\frac{288^\circ K}{T_{AMB}} \right)^{1.53}$$

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

De/kt

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PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

~~P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.~~

~~H_{obs} = Specific humidity of ambient air at test.~~

~~e = Transcendental constant (2.718).~~

~~T_{amb} = Temperature of ambient air at test.~~

14. Test results will be the average of 3 valid runs. The Central District office will be notified at least 30 days in advance of the compliance test. The source shall operate between 90% and 100% of permitted capacity as adjusted for ambient temperature during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion:

15. Water injection shall be utilized for NOx control. The water to fuel ratio at which compliance is achieved shall be incorporated into the permit and shall be continuously monitored. In addition, the permittee shall leave a space suitable for future installation of SCR equipment. Alternative combustion controls (i.e., dry low NOx burners) can be installed with prior Department-Bureau of Air Regulation approval provided NOx emission levels are met.

16. Combustion control shall be utilized for CO control. Due to the lack of operational experience with the LM6000 and the uncertainty of actual CO emissions, the permittee shall leave a space suitable for future installation of an oxidation catalyst. Once performance testing has been completed, the decision to require an oxidation catalyst will be based on a cost/benefit analysis of using such control.

17. To determine compliance with the capacity factor condition for oil firing, the Permittee shall maintain daily records of fuel usage. All records shall be maintained for a minimum of three years after the date of each record and shall be made available to representatives of the Department upon request.

18. Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall also be recorded per fuel oil shipment. These records shall also be kept by the company for at least three years and made available for regulatory agency's inspection.

Rule Requirements

19. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes and Chapters 17-2 and 17-4, Florida Administrative Code.

PERMITTEE:
Lake Cogen Ltd.

Permit Number: AC 35-196459
PSD-FL-176
Expiration Date: June 1, 1993

20. This source shall comply with all requirements of 40 CFR 60, Subparts GG and Db and F.A.C. Rule 17-2.660(2)(a), Standards of Performance for Stationary Gas Turbines and Standards of Performance for Industrial, Commercial, and Institutional Steam Generating Units.

21. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210(1)).

22. This source shall comply with F.A.C. Rule 17-2.700, Stationary Point Source Emission Test Procedures.

23. Pursuant to F.A.C. Rule 17-2.210(2), Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: sulfur, nitrogen content and lower heating value of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Central District office.

24. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

25. An application for an operation permit must be submitted to the Central Florida District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day

of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

Table 1. Allowable Emission Limits Combined Cycle Combustion Turbine Cogeneration Facility

Pollutant	Source ^a	Fuel ^b	Basis of Limit	Allowable Emission Limits	
				lbs/hr	tons/year
NOx	CT	NG	BACT: 25 ppmvd at 15% O ₂	78.8	404.7
	CT	DFO	BACT: 42 ppmvd at 15% O ₂	137.0	
	DB	NG	BACT: 0.1 lb/MMBtu	45.0	
CO	CT	NG	BACT: 42 ppmvd	80.6*	466.5*
	CT	DFO	BACT: 78 ppmvd	151.0*	
	DB	NG	BACT: 0.2 lb/MMBtu	90.0*	
PM/PM10	CT	NG	BACT: 0.0065 lb/MMBtu	5.0	27.0
	CT	DFO	BACT: 0.026 lb/MMBtu	20.0	
	DB	NG	BACT: 0.006 lb/MMBtu	2.6	
SO ₂	CT	DFO	Established by Applicant 0.1% S	80.0	21.0
VOC	CT	NG	Established by Applicant	3.3	30.8
	CT	DFO	Established by Applicant	8.3	
	DB	NG	Established by Applicant	13.5	
Mercury (Hg)	CT	DFO	Established by Applicant	--	0.1
Lead (Pb)	CT	DFO	Established by Applicant	--	0.6
Beryllium (Be)	CT	DFO	Established by Applicant	--	0.0004
Sulfuric Acid Mist	CT	DFO	Established by Applicant	--	7.0

^a CT = combustion turbine

DB = duct burner

^b NG = natural gas

DFO = distillate fuel oil

* Emission limit for CO subject to change should additional control (oxidation catalyst) be required.

DARM-EM-05

TO: District Air Program Administrators
County Air Program Administrators

FROM: Howard L. Rhodes, Director
Division of Air Resources Management

DATE: November 22, 1995

SUBJECT: Guidance on Rate of Operation During Compliance
Testing for Combustion Turbines

This memo is to provide guidance on determining the rate of operation during compliance testing for combustion turbines (CTs).

The mass throughput rate of combustion turbines is inversely proportional to temperature and humidity measured at the CT inlet as a result of the changing air densities encountered. Inlet air temperature is the predominant factor; therefore, higher temperatures will result in a lower heat input rate (MMBtu/hr) and vice versa. The temperature is referenced to the CT inlet temperature rather than ambient temperature, as some CTs are equipped with inlet air conditioning systems (e.g., chillers or evaporative coolers) to maintain optimum operating temperature. Inlet air temperature and ambient temperature are equivalent in cases where no conditioning systems are used. Variations of heat input (capacity) are to be expected due to the range of ambient temperatures and humidities encountered in Florida. Over the usual operating ranges, the CT operating curve (capacity vs. inlet air temperature) is essentially a straight line. An owner or operator of a CT may use these curves in determining the maximum heat input rate for the unit.

The determination of the rate of CT operation during compliance testing is illustrated in the following example. The heat input limit is often referenced to 59 F, and in this example, corresponds to 750 MMBtu/hr (Point A). On the date that compliance testing is conducted, the average ambient (or conditioned) air temperature during the test period is determined to be 80 F. According to the attached curve, the maximum design heat input rate achievable is 700 MMBtu/hr (Point B). The CT has successfully achieved 90 percent of its maximum permitted capacity for this temperature if it is determined to be operating at 630 MMBtu/hr or more (Point C). In this example, the dashed line represents 90 percent of the maximum heat input value achievable over a range of inlet air temperatures. Heat input may vary depending on CT characteristics; therefore, manufacturer's curves for correction to other temperatures shall be provided to the Department, if a source intends to use the curves for compliance purposes. At the request of a permittee, the following condition shall be incorporated into the construction and corresponding operating permits:

"Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 95-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input vs. inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 105 percent of the value reached during the test. Data, curves, and

calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report."

To demonstrate compliance with federal new source performance standard Subpart GG - Standards of Performance for Stationary Gas Turbines, an initial test shall be conducted at four load points and corrected to ISO conditions for comparison to the NSPS allowable. Subsequent annual compliance tests conducted to establish compliance with NOx limits that are more stringent than the NSPS standard shall not require an ISO correction or testing at four load points; rather, the testing shall be done at capacity, as defined above. However, when testing shows that NOx emissions exceed the standard when operating at capacity, the company shall recalibrate the NOx emission control system using emission testing at four loads as required in Subpart GG.

HLR/chf/h

Attachment