AUG 1 1 2000

State of Florida } S.S.
COUNTY OF ORANGE

BUREAU OF AIR REGULATION

Before the undersigned authority personally appeared Julia Nichols, who on oath says that he/she is the Legal Advertising Representative of The Orlando Sentinel, a daily newspaper published at ORLANDO in ORANGE County, Florida; that the attached copy of advertisement, being a PUBLIC NOTICE OF in the matter of 0970043-004-AC & 0970043-008-AV in the ORANGE Court, was published in said newspaper in the issue; of 07/12/00

Affiant further says that the said Orlando Sentinel is a newspaper published at ORLANDO, in said ORANGE County, Florida, and that the said newspaper has heretofore been continuously published in said ORANGE County, Florida, each Week Day and has been entered as second-class mail matter at the post office in ORLANDO in said ORANGE County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

The foregoing instrument was acknowledged before me this 13th day of July, 2000, by Julia Nichols, who is personally known to me and who did take an oath.

(SEAL)

My Comm Exp. 3/10/2001
Bonded By Service Ins
No. CC619266
[ ] Personally Known [ ] Other I.D.

cc: G. Kuehner
J. Sheplak
CD
NPS
[illegible], G. [illegible], EPA

Project No. 0970043-008-AV:
Revision of Title V Air Operation
Permit No. 0970043-002-AV

Kissimmee Utility Authority
Cane Island Power Park
Osceola County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit and a revised Title V major source operation permit to the Kissimmee Utility Authority for the Cane Island Power Park located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida. The applicant proposes to add an inlet air fogging system to the existing Unit 2 combined cycle combustion turbine. The system is designed to provide evaporative cooling of the compressor inlet air, which will allow a corresponding boost in power production. The applicant's mailing address is P.O. Box 423219, Kissimmee, FL 34742-3219.

The project will allow operation of the existing Unit 2 at higher levels of heat input and powar output during periods of peak power demands and warm temperatures. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows performance of the combustion turbine at a lower temperature than the given ambient conditions. The existing combustion turbine remains subject to 40 CFR 60, Subpart GG, the New Source Performance Standards for stationary gas turbines.

Based on a comparison of past actual operation to future allowable operation, the Department determines that this project does not exceed the Significant Emissions Rates specified in Table 62-212.400-2, F.A.C. Therefore, the project is not subject to the requirements of Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) and no determination of Best Available Control Technology (BACT) determination is required. The analysis is detailed in the Department's Technical Evaluation and Preliminary Determination. Because PSD does not apply and maximum emissions will not increase, no air quality impact analysis was required. Emissions from the project will not consume PSD increment and will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The proposed project will not change any previous modeling demonstrations. The DRAFT air construction permit is a minor modification to the initial PSD Permit No. PSD-FL-182 and authorizes installa-

[illegible] on December [illegible]. The modification establishe[s] final NOx emissions limit of [illegible] ppmvd for Unit No. 1, a cor[re]sponding decrease in ann[ual] hours of operation to 5000, a[nd] a combined NOx emissions c[ap] for Unit Nos. 1 and 2 of 36[illegible] tons per consecutive [illegible] months. The DRAFT Title V P[er]mit will revise only the applic[a]ble portions of Initial Title V Operation Permit No. 09700[43]-002-AV, including: the placa[rd] page, pages in Subsections [A,] B, and C of Section III (cover[ing] Emissions Units 001 and 00[2]), Appendix H-1 (Permitting His[to]ry), and Appendix S (Per[mit] Summary Tables). Addition[al] details regarding the Title V re[vi]sions are provided in the D[e]partment's Statement of Basis.

The Department will issue t[he] FINAL air construction per[mit] with the attached conditions u[n]less a response received in a[c]cordance with the following pr[o]cedures results in a differe[nt] decision or significant change [of] terms or conditions. The Depa[rt]ment will issue the Title V PR[O]POSED Permit, and subseque[nt] Title V FINAL Permit, in acc[or]dance with the conditions of t[he] attached revisions to the Title [V] DRAFT Permit unless a [re]sponse received in accordan[ce] with the following procedur[es] results in a different decision [or] significant change of terms [or] conditions. Note that the FIN[AL] air construction permit may [be] issued prior to the FINAL Title [V] air operation permit.

The Department will acce[pt] written comments concernin[g] the proposed permit issuanc[e] actions for a period of thirty (3[0]) days from the date of publica[]tion of this Public Notice of In[]tent to Issue Air Permits. Writte[n] comments should be provide[d] to the Department's Bureau [of] Air Regulation at 2600 Bla[ir] Stone Road, Mail Statio[n] #5505, Tallahassee, FL 3239[9-]2400. Any written commen[ts] filed shall be made available f[or] public inspection. If written com[]ments received result in a sign[if]icant change in the propose[d] agency action, the Departme[nt] shall revise the proposed perm[it] and require, if applicable, anoth[]er Public Notice.

Mediation is not available [in] this proceeding.

A person whose substantial interests are affected by the proposed permitting decision 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 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. 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 (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. 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, F.A.C.

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.

With regard to the Title V permitting action and pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 850/488-0114

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555

The complete project file includes the application, technical evaluations, DRAFT permits, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the project engineer, Jeff Koerner, in the New Source Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

COR3407925 JULY 12, 2000

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

P.E. CERTIFICATION STATEMENT

PERMITTEE

Kissimmee Utility Authority
P.O. Box 423219
Kissimmee, FL 34742-3219

PSD Project No.	0970043-008-AC
PSD Permit No.	PSD-FL-182I
Title V Permit No.	0970043-009-AV
SIC No.	4911

PROJECT DESCRIPTION

The applicant requested authorization to install a compressor inlet air fogging system for the existing Unit 2 combustion turbine at KUA's Cane Island Power Park. This equipment will provide evaporative cooling and a corresponding increase in power production of up to 8 MW depending on the initial ambient conditions. The maximum heat input continues to be defined by the coldest day, because evaporative cooling provides no benefit on such days. Therefore, this project will not increase permitted capacity, but rather shifts operation on hot days up the power output performance curve, but within the original design range of Unit 2. Inlet foggers are routinely included in new combustion turbine projects and have not affected the Department's decisions regarding Best Available Control Technology. Because Unit 2 averaged nearly 7800 hours per year for the previous two years, it was considered a base loaded unit. Therefore, the fogger project is unlikely to increase the availability of this unit.

Based on a comparison of past actual to future potential emissions, the project does not exceed the Significant Emission Rates specified in Table 62-212.400-2, F.A.C. Therefore, the project is a minor modification of the original PSD permit. The Draft Permit authorizes installation of the equipment with no restrictions on operation. The applicant also requested the Department to incorporate the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months. Therefore, the Intent to Issue and Public Notice package also includes references for the appropriate revisions to the Title V permit.

CERTIFICATION

I hereby certify that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

Jeffery F. Koerner, P.E.
Registration Number: 49441

6-30-00
Date

Department of Environmental Protection
Bureau of Air Regulation, New Source Review Section
Phone (850) 414-7268

"More Protection, Less Process"

Printed on recycled paper.

Florida Department of
Memorandum Environmental Protection

TO: ~~Clair Fancy, Chief – Bureau of Air Regulation~~

THROUGH Al Linero, Administrator – New Source Review Section
Scott Sheplak, Administrator – Title V Section

FROM: Jeff Koerner, Project Engineer - New Source Review Section

DATE: June 30, 2000

SUBJECT: Kissimmee Utility Authority – Cane Island Power Park
Inlet Air Fogging for Existing Unit 2 Combustion Turbine
Project No. 0970043-008-AC
Permit No. PSD-FL-182I

Attached is the public notice package for the installation of a compressor inlet air fogging system for the existing Unit 2 combustion turbine at the Cane Island Power Park located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida. Based on the last two years, Unit 2 averaged nearly 7800 hours of operation per year. A comparison of past actual to future potential emissions indicates that the proposed project does not trigger PSD. In fact, the operating history defines Unit 2 as a base loaded unit so that the addition of the fogging system is not likely to make this unit any more available in the future. The Draft Permit authorizes installation of the equipment and does not restrict operation as requested by the applicant. No Air Quality Analysis was required because this project is minor with respect to PSD. In addition, the maximum hourly emissions rate continues to be defined by the coldest expected day of operation.

The applicant requested a revision to the Title V permit to accommodate the new equipment. On June 30, 2000, the applicant also requested that the revised Title V permit incorporate Project No. 0970043-007-AC issued on December 21, 1999 that modified permit PSD-FL-182. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months. Therefore, this package includes the corresponding revised draft pages of the Title V permit and appropriate references in the Intent to Issue and Public Notice. The applicant will publish a single Public Notice covering both the air construction permit and Title V revision. The air construction permit will be issued according to the standard schedule for a minor PSD permit modification. The Title V permit revision will follow the Title V notice requirements including draft, proposed, and final permits. I have discussed this project with Scott Sheplak and he agrees that this conforms to the Department's mission statement of "More Protection, Less Process".

Day #74 is August 27, 2000. I recommend your approval of the attached Intent to Issue package for this project.

JFK

Attachments

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. A. K. Sharma
Director of Power Supply-KUA
P. O. Box 423219
Kissimmee, FL 34742-3219

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*: Ben Edelen
B. Date of Delivery: 7.11.00

C. Signature
X Ben Edelen ☐ 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)*
Z 341 355 325

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

Z 341 355 325

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

Sent to: AK Sharma	
Street & Number: PO Box 423219	
Post Office, State, & ZIP Code: Kissimmee FL 34742-3219	
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: 7/3/00	

PS Form **3800**, April 1995

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

June 30, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

A.K. Sharma, Director of Power Supply
Kissimmee Utility Authority
P.O. Box 423219
Kissimmee, FL 34742-3219

Re: Project No. 0970043-008-AC, (PSD-FL-182I)
Project No. 0970043-009-AV
Cane Island Power Park
Inlet Air Fogging System for Unit 2 Combustion Turbine

Dear Mr. Sharma:

Enclosed is one copy of the Department's Intent to Issue package to add inlet air fogging to Unit 2 at the Cane Island Power Park. The Draft Title V permit revision also incorporates the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. This package includes:

- Project No. 0970043-008-AC, (PSD-FL-182I): Draft Air Construction Permit and the Technical Evaluation and Preliminary Determination;
- Project No. 0970043-009-AV: Revised pages of Title V Air Operation Permit 0970043-002-AV and the Statement of Basis; and
- Intent to Issue Air Permits and the Public Notice of Intent to Issue Air Permits for both projects.

These projects are being issued together with a single public notice. Thereafter, each final permit will be issued in accordance with the permitting procedures for air construction (PSD) and air operation (Title V) permits. The Public Notice of Intent to Issue Permits must be published one time only, as soon as possible, in the legal advertisement section of a newspaper of general circulation in the area affected, pursuant to the requirements Chapter 50, Florida Statutes. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A. A. Linero, P.E., Administrator, New Source Review Section at the above letterhead address. If you have any other questions, please contact Jeff Koerner at 850/414-7268 or Mr. Linero at 850/488-0114.

Sincerely,

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

CHF/AL/jfk

Enclosures

In the Matter of an
Application for Permit by:

A.K. Sharma, Director of Power Supply
Kissimmee Utility Authority
P.O. Box 423219
Kissimmee, FL 34742-3219

Cane Island Power Park
Unit 2 Inlet Air Fogging System
Osceola County

INTENT TO ISSUE AIR PERMITS

Project No. 0970043-008-AC: Modification of Air Construction Permit No. PSD-FL-182I
Project No. 0970043-009-AV: Revision of Title V Air Operation Permit No. 0970043-002-AV

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit and a revised Title V air operation permit for the proposed project as detailed in the application, the Technical Evaluation and Preliminary Determination, and the Statement of Basis for the reasons stated below.

The applicant, Kissimmee Utility Authority, applied on June 6, 2000, to the Department for both an air construction permit and revised Title V air operation permit. The applicant proposes to add an inlet air fogging system to Unit 2 at the Cane Island Power Park located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida. 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, 62-212, and 62-213. The above actions are not exempt from air construction and operation permitting procedures. The Department has determined that an air construction permit is required to install the proposed system and that a revised Title V air operation permit is required to operate the equipment. In addition, the revised Title V permit will incorporate the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months.

The Department intends to issue both permits based on the belief that reasonable assurances have been provided to indicate that installation and operation of this new project will not adversely impact air quality, and that the source will comply with all appropriate provisions of Chapters 2-4, 62-204, 62-210, 62-212, 62-213, 62-256, 62-257, 62-281, 62-296, and 62-297, F.A.C.

Pursuant to Sections 403.815 and 403.087, F.S. and Rules 62-110.106(7)(a)1. and 62-210.350(3), F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permits. The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. Where there is more than one newspaper of general circulation in the county, the newspaper used must be one with significant circulation in the area that may be affected by the permit. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the FINAL air construction permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will issue the Title V PROPOSED Permit, and subsequent Title V FINAL Permit, in accordance with the conditions of the attached revisions to the Title V DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. Note that the FINAL air construction permit may be issued prior to the FINAL Title V air operation permit.

The Department will accept written comments concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of Public Notice of Intent to Issue Air Permits. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received

result in a significant change in a proposed agency action, the Department shall revise the appropriate DRAFT permit and require, if applicable, another Public Notice.

A person whose substantial interests are affected by the proposed permitting decision 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 3900 Commonwealth Boulevard, Mail Station #35, 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 intent. 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 publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. 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, F.A.C.

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.

Mediation is not available in this proceeding.

In addition to the above, a person subject to regulation has a right to apply to the Department 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 local or 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.

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.

With regard to the Title V permitting action and pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, FAC. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: United States Environmental Protection Agency, 401 M Street SW, Washington, D.C. 20460.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Permits, Public Notice of Intent to Issue Air Permits, Technical Evaluation and Preliminary Determination, Draft Air Construction Permit, Statement of Basis, and Draft Title V Air Operation Permit Revision, was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 7/3/00 to the person(s) listed:

Mr. A.K. Sharma, KUA*
Mr. Jerome Guidry, Perigree Technical Services, Inc.
Mr. Len Kozlov, Central District Office DEP
Mr. Scott Sheplak, BAR – Title V Section
Mr. Gregg Worley, EPA Region 4
Ms. Gracey Danois, EPA Region 4
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.

Charlotte Hayes 7/3/00
(Clerk) (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMITS
STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Project No. 0970043-008-AC: Modification of Air Construction Permit No. PSD-FL-1821
Project No. 0970043-009-AV: Revision of Title V Air Operation Permit No. 0970043-002-AV

Kissimmee Utility Authority
Cane Island Power Park
Osceola County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit and a revised Title V major source operation permit to the Kissimmee Utility Authority for the Cane Island Power Park located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida. The applicant proposes to add an inlet air fogging system to the existing Unit 2 combined cycle combustion turbine. The system is designed to provide evaporative cooling of the compressor inlet air, which will allow a corresponding boost in power production. The applicant's mailing address is P.O. Box 423219, Kissimmee, FL 34742-3219.

The project will allow operation of the existing Unit 2 at higher levels of heat input and power output during periods of peak power demands and warm temperatures. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows performance of the combustion turbine at a lower temperature than the given ambient conditions. The existing combustion turbine remains subject to 40 CFR 60, Subpart GG, the New Source Performance Standards for stationary gas turbines.

Based on a comparison of past actual operation to future allowable operation, the Department determines that this project does not exceed the Significant Emissions Rates specified in Table 62-212.400-2, F.A.C. Therefore, the project is not subject to the requirements of Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) and no determination of Best Available Control Technology (BACT) determination is required. The analysis is detailed in the Department's Technical Evaluation and Preliminary Determination. Because PSD does not apply and maximum emissions will not increase, no air quality impact analysis was required. Emissions from the project will not consume PSD increment and will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The proposed project will not change any previous modeling demonstrations. The DRAFT air construction permit is a minor modification to the initial PSD Permit No. PSD-FL-182 and authorizes installation of the inlet air fogging system.

This public notice also includes a DRAFT Title V air operation permit, which authorizes operation of the proposed equipment. The applicant also requested that the Title V permit be updated to incorporate the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months. The DRAFT Title V Permit will revise only the applicable portions of Initial Title V Air Operation Permit No. 0970043-002-AV, including: the placard page, pages in Subsections A, B, and C of Section III (covering Emissions Units 001 and 002), Appendix H-1 (Permitting History), and Appendix S (Permit Summary Tables). Additional details regarding the Title V revisions are provided in the Department's Statement of Basis.

The Department will issue the FINAL air construction permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will issue the Title V PROPOSED Permit, and subsequent Title V FINAL Permit, in accordance with the conditions of the attached revisions to the Title V DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. Note that the FINAL air construction permit may be issued prior to the FINAL Title V air operation permit.

The Department will accept written comments concerning the proposed permit issuance actions for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Permits. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

Mediation is not available in this proceeding.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

A person whose substantial interests are affected by the proposed permitting decision 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 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. 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 (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. 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, F.A.C.

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.

With regard to the Title V permitting action and pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 850/488-0114

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555

The complete project file includes the application, technical evaluations, DRAFT permits, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the project engineer, Jeff Koerner, in the New Source Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

NOTICE TO BE PUBLISHED IN THE NEWSPAPER

Department of
Environmental Protection

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

Jeb Bush
Governor

David B. Struhs
Secretary

P.E. CERTIFICATION STATEMENT

PERMITTEE

Kissimmee Utility Authority
P.O. Box 423219
Kissimmee, FL 34742-3219

PSD Project No.	0970043-008-AC
PSD Permit No.	PSD-FL-182I
Title V Permit No.	0970043-009-AV
SIC No.	4911

PROJECT DESCRIPTION

The applicant requested authorization to install a compressor inlet air fogging system for the existing Unit 2 combustion turbine at KUA's Cane Island Power Park. This equipment will provide evaporative cooling and a corresponding increase in power production of up to 8 MW depending on the initial ambient conditions. The maximum heat input continues to be defined by the coldest day, because evaporative cooling provides no benefit on such days. Therefore, this project will not increase permitted capacity, but rather shifts operation on hot days up the power output performance curve, but within the original design range of Unit 2. Inlet foggers are routinely included in new combustion turbine projects and have not affected the Department's decisions regarding Best Available Control Technology. Because Unit 2 averaged nearly 7800 hours per year for the previous two years, it was considered a base loaded unit. Therefore, the fogger project is unlikely to increase the availability of this unit.

Based on a comparison of past actual to future potential emissions, the project does not exceed the Significant Emission Rates specified in Table 62-212.400-2, F.A.C. Therefore, the project is a minor modification of the original PSD permit. The Draft Permit authorizes installation of the equipment with no restrictions on operation. The applicant also requested the Department to incorporate the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months. Therefore, the Intent to Issue and Public Notice package also includes references for the appropriate revisions to the Title V permit.

CERTIFICATION

I hereby certify that the engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including but not limited to the electrical, mechanical, structural, hydrological, and geological features).

Jeffery F. Koerner, P.E.
Registration Number: 49441

6-30-00
Date

Department of Environmental Protection
Bureau of Air Regulation, New Source Review Section
Phone (850) 414-7268

STATEMENT OF BASIS

Kissimmee Utility Authority
Cane Island Power Park
Osceola County

Facility ID No. 0970043

Project No. 0970043-009-AV
Title V Air Operation Permit Revision
(Initial Title V Permit No. 0970043-002-AV)

This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work and operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

This existing facility consists of two fossil fuel-fired combustion turbine electric generating units and two distillate oil storage tanks. Emissions Unit No. 1 is a 40 MW General Electric Model LM-6000PA simple cycle combustion turbine with an electrical generator set. Emission Unit 002 is a General Electric Model PG7111(EA) combustion turbine with electrical generator set and an unfired heat recovery steam generator (HRSG) with a steam-electric generator. Unit 2 produces 80 MW during simple cycle operation and 120 MW during in combined cycle operation. Each combustion turbine fires natural gas as the primary fuel with very low sulfur distillate oil (≤ 0.05% sulfur by weight) as a backup fuel. Both units have simple cycle stacks. Unit 2 also has a separate HRSG stack for combined cycle operation.

On June 6, 2000, the permittee requested the addition of an inlet air fogging system for Unit 2 as both an air construction permit and a minor revision to the Title V operation permit. The Department has reviewed the request and determined that the project will not trigger PSD and will not require any restrictions on operation. On June 30, 2000, the permittee also requested incorporating the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months. The Department is simultaneously issuing a DRAFT air construction permit authorizing installation of the inlet air fogging system and a DRAFT Title V air operation permit to operate the equipment and incorporate the earlier PSD modification. A single Intent to Issue Permit package has been issued to cover both of these permitting actions.

The revised DRAFT Title V permit includes only the following pages (conditions) for review:

- A new placard page;
- Subsection A of Section III (Emissions Unit 001): page 8 (A.3 and A.5) and page 11 (A.15)
- Subsection B of Section III (Emissions Unit 002): page 12 (B.3), page 13 (B.3), pages 15/16 (B.12)
- Subsection C of Section III (Common Conditions for Emissions Units 001 and 002): page 17 (C.1)
- Appendix H-1 (Permit History): page H1
- Appendix S (Permit Summary Tables): pages S1, S2, S3, and S4

All changes in the DRAFT Title V Permit are indicated with a dotted underline and a revised date. The electronic version includes the entire Draft Permit with changes also indicated in blue text.

Permittee:
Kissimmee Utility Authority
1701 West Carroll Street
Kissimmee, FL 34741-6804

FINAL Permit No. 0970043-002-AV
Facility ID No. 0970043
SIC Nos.: 49
Project: Initial Title V Air Operation Permit

PLANT / LOCATION: This permit is for the operation of the Kissimmee Utility Authority's Cane Island Power Park. This facility is located at 6075 Old Tampa Highway, Intercession City, Osceola County. The UTM coordinates are Zone 17, 449.8 East, and 3127.9 North. The Latitude is 28 16' 40" North and the Longitude is 81 31' 01" West.

REVISION: Project No. 0970043-009-AV revised the initial Title V permit to add an inlet air fogging system to Emissions Unit 002 and incorporate conditions of previous PSD modification 0970043-007-AC for Emissions Unit 001. Revised pages are marked with the "Revised Date".

STATEMENT OF BASIS: This Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work and operate the facility shown on the application and approved drawings, plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix U-1, List of Unregulated Emissions Units and/or Activities
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix TV-1, Title V Conditions (version dated 12/02/97)
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)
Table 297.310-1, Calibration Schedule (version dated 10/07/96)
Figure 1 - Summary Report-Gaseous And Opacity Excess Emission And Monitoring System Performance Report (version dated 7/96)
Alternate Sampling Procedure, ASP No. 97-B-01
BACT Determination dated April 7, 1993
Order extending permits dated March 18, 1999

Effective Date: January 1, 2000
Revised Date: (DRAFT)
Renewal Application Due Date: July 5, 2004
Expiration Date: December 31, 2004

Howard L. Rhodes, Director
Division of Air Resource Management

HLR/sms/mph/jfk

A.3. Methods of Operation - Fuels. The only fuels allowed to be fired are pipeline-quality natural gas and low sulfur No. 2 distillate oil. The sulfur content of the No. 2 distillate oil shall not exceed 0.05% sulfur by weight. Operation of Unit No. 1 shall not exceed 5000 hours during any consecutive 12 months. Of the total allowable hours of operation, Unit No. 1 shall fire distillate oil for no more than:

a. 800 hours during any consecutive 12 months if natural gas is available, or
b. 1000 during any consecutive 12 months if natural gas is unavailable.

{Permitting Note: The limitations of specific conditions A.3 and A.6 are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334}
[Rule 62-213.410, F.A.C., AC 49-205703 (PSD-FL-182); 0970043-007-AC (PSD-FL-182A); 0970043-009-AV; Revised on (DRAFT).]

Emission Limitations and Standards

A.4. Visible Emissions. Visible emissions shall not exceed 10 percent opacity, except for during startup, shutdown or periods of part load operation, at which time visible emissions shall not exceed 20 percent opacity.
[AC 49-205703 (PSD-FL-182)]

A.5. The maximum allowable emissions from Unit 1 shall not exceed the emission limitations listed below.

Pollutant	Emission Limits			Basis
	Gas	Number 2 Fuel Oil	Equivalent Emissions Tons/Year [a, b]	
NO_X [c]	25~~/15~~ ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	116.9	BACT
SO_2	nil	20 lb/hr	10.0	BACT
PM	0.0245lb/mmBtu	0.0323 lb/MMBtu	40.9	BACT
H_2SO_4	nil	2.2 lb/hr	1.1	BACT
VOC	1.4 lb/hr	3 lb/hr	6.9	BACT
CO	30 ppmvd	63 ppmvd	193.2	BACT
Opacity	10% (see A.4.)	10% (see A.4.)		BACT
Be [d]	nil	2.5e-6 lb/MMBtu	< 1	BACT
As [d]	nil	4.2e-6 lb/MMBtu	< 1	AC 49-205703
Hg [d]	nil	3.1e-6 lb/MMBtu	< 1	AC 49-205703
Pb [d]	nil	2.8e-5 lb/MMBtu	< 1	AC 49-205703

a. Tons per year based on 4000 hrs/yr for natural gas firing, 1000 hrs/yr for number 2 fuel oil firing.
b. Based on 372 MMBtu/hr for number 2 fuel oil and 367 MMBtu/hr for natural gas.
c. Original permit PSD-FL-182 limited NOx emissions to 25 ppmvd for gas firing to be reduced to 15 ppmvd. On December 21, 1999, Project No. 0970043-007-AC modified the PSD permit establishing the final NO_x emission limit as 25 ppmvd when firing natural gas with a corresponding reduction in hours of operation 5000 hours per year and a combined NOx emissions cap with Unit No. 2.
d. Limits based upon an approved emission factor, which is subject to change in the future.

[AC49-205703 (PSD-FL-182); 0970043-007-AC; 0970043-009-AV; Revised on (DRAFT)]

A.12 Excess Emissions by CEMS. The CEMS shall be used to determine periods of excess emissions as per 40 CFR 60.334. Excess emissions are defined for this emissions unit as any 60-minute period during which the average emissions exceed the emission limits of specific condition **A.5.** of this permit. Periods of startup, shutdown and malfunction shall be monitored, recorded and reported with excess emissions following the format and requirements of 40 CFR 60.7.

[AC 49-205703 (PSD-FL-182)]

Record Keeping and Reporting Requirements

A.13. Excess Emission Reports. Semi-annual excess emission reports shall be submitted to the DEP's Central District Office. These reports shall be postmarked by the 30th day following the end of each calendar half. Each excess emission report shall include the information required in 40 CFR 60.7(c) and 60.334.
[AC 49-205703 (PSD-FL-182)]

A.14. Natural Gas Sulfur Content Records Required. The owner or operator shall receive and maintain records of sulfur content of natural gas provided by the natural gas supplier, as per 40 CFR 60.334. The records shall report total sulfur content in terms of grains of sulfur per hundred cubic feet (standard conditions).
[AC 49-205703 (PSD-FL-182)]

A.15. Additional Reports Required. The owner or operator shall report the following with the Annual Operating Report (AOR) by March 1 of each calendar year: sulfur and nitrogen contents, by weight, and lower heating value of the fuel oil being fired, annual fuel consumption of number 2 fuel oil and natural gas, hours of operation per fuel usage and air emission limits. As it may become available, the permittee shall also provide the Department with information regarding documented enhancements to the LM6000PA, dual-fuel class, combustion turbine machine, which have demonstrated in the field the ability to achieve a continuous NO_X emission rate of 15 ppmvd while firing natural gas.
[Rule 62-210.370(3), F.A.C.; and AC49-205703 (PSD-FL-182); 0970043-007-AC; 0970043-009-AV; Revised on (DRAFT)]

Other Conditions

A.16. Maintain Capability to install an SCR. This emissions unit is permitted for maximum NO_X emission levels of 15 (gas)/42 (oil) ppmv. The Department will revise permitted emission levels for NO_X if the manufacturer achieves an even lower NO_X emission, pursuant to F.A.C. Rule 62-4.080. The permittee shall maintain capability for future installation of a selective catalytic reduction (SCR) system. This is required in the event that the permittee is unable to comply with the permitted NO_X levels and the Department requires an SCR to be installed. In the event an SCR system is required to be installed, the emission limitations shall be established at the time of installation by stack test results and through a revised determination of BACT.
[AC 49-205703 (PSD-FL-182)]

A.17. This emissions unit is also subject to conditions **C.1.** through **C.13.** contained in **Subsection C. Common Conditions.**

A.18. This emissions unit is also subject to conditions **D.1.** through **D.6.** contained in **Subsection D. NSPS Common Conditions.**

Subsection B. This section addresses the following emissions unit.

002	Combined Cycle Combustion Turbine Unit 2, rated at 120 MW, 869 MMBtu/hr for natural gas and 928 MMBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack.

{Permitting Notes: This emissions unit is regulated under Acid Rain, Phase II; Rule 62-210.300, F.A.C., Permits Required; and, is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The affected facility to which this subpart applies is the combined cycle gas turbine, Unit 2. This unit underwent a BACT Determination dated April 7, 1993. BACT Limits were incorporated into the subsequent air construction/PSD permits including AC 49-205703 (PSD-FL-182). Exhaust is vented through the heat recovery steam generator that is not equipped with duct burners and then through a 75 ft. stack. NO_X emissions are controlled by low-NO_X combustors, and by water injection, whereas SO_2 and H_2SO_4 emissions are controlled by firing 0.05%S oil for only limited time periods. The turbine exhaust may also be vented through a bypass stack for simple cycle operation when the HRSG or steam turbine is down for maintenance and/or repair. The turbine began commercial operation in 1995.}

The following specific conditions apply to the emissions unit listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Permitted Capacity. The maximum operation heat input rates are as follows:

Unit No.	MMBtu/hr Heat Input	Fuel Type
002	869*	Natural Gas
	928*	No. 2 Fuel Oil

* Based on 101.3 kilopascals pressure, 288 Kelvin and 60% relative humidity (ISO standard day conditions), and lower heating value of the fuel fired.

{Permitting Note: The heat input limitations have been placed in each permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted within 95 to 100 percent of the emission unit's rated capacity (or to limit future operation to 105 percent of the test load), to establish appropriate emission limits and to aid in determining future rule applicability.}
[Rules 62-4.160(2), 62-210.200(PTE),F.A.C. and AC 49-205703 (PSD-FL-182)]

B.2. Emissions Unit Operating Rate Limitation After Testing. See specific condition **C.8.**
[Rule 62-297.310(2), F.A.C.]

B.3. Methods of Operation.

a. Fuels: The only fuel(s) allowed to be burned are natural gas and number 2 fuel oil (0.05%), except that firing of number 2 fuel oil is limited to no more than 1000 hours per year if natural gas is unavailable, or no more than 800 hours per year if gas is available. The sulfur content of the fuel oil shall not exceed 0.05%, by weight. {Permitting Note: The limitations of specific conditions A.3 and A.6 are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334}

b. Inlet Air Fogging: The permittee is authorized to install and operate a high pressure, direct water spray fogging system. The proposed equipment will inject up to 26 gpm from spray nozzles to provide evaporative cooling of the compressor inlet air to Unit 2. Based on an inlet air mass flow rate of 2,077,077 pounds per hour, the inlet air fogging system shall be designed to achieve a 25° F cooling reduction from an ambient temperature of 95° F to cooled compressor inlet air

temperature of 70° F. {Permitting Note: The inlet air fogging system will typically operate during periods of peak power demand and high ambient temperatures. Fogging provides evaporative cooling of the inlet air to the compressor, which allows a higher mass flow rate with a corresponding increase in power production of up to 8 MW depending on initial ambient conditions. The increased power production is realized by firing additional fuel, which results in increased actual emissions. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows performance of the combustion turbine at a lower temperature than the existing ambient conditions.}
[Rule 62-213.410, F.A.C.; AC 49-205703 (PSD-FL-182); 0970043-008-AC (PSD-FL-182I); 0970043-009-AV; Revised on (DRAFT)]

Emission Limitations and Standards

B.4. Visible Emissions. Visible emissions shall not exceed 10 percent opacity, except for during startup, shutdown or periods of part load operation, at which time visible emissions shall not exceed 20 percent opacity.
[AC 49-205703 (PSD-FL-182)]

B.5. The maximum allowable emissions from Unit 2 shall not exceed the emission limitations listed below.

Pollutant	Emission Limits			Basis
	Gas	Number 2 Fuel Oil	Equivalent Emissions Tons/Year [a, b]	
NO_X [c]	15 ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	290.6	BACT
SO_2	nil	52 lb/hr	26	BACT
PM	0.010 lb/MMBtu	0.0162 lb/MMBtu	41.2	BACT
H_2SO_4	nil	5.72 lb/hr	2.86	BACT
VOC	2 lb/hr	5 lb/hr	10.26	BACT
CO	20 ppmvd	20 ppmvd	242	BACT
Opacity	10% (see B.4.)	10% (see B.4.)		BACT
Be [d]	nil	2.5e-6 lb/MMBtu	< 1	BACT
As [d]	nil	4.2e-6 lb/MMBtu	< 1	AC 49-205703
Hg [d]	nil	3.0e-6 lb/MMBtu	< 1	AC 49-205703
Pb [d]	nil	2.8e-5 lb/MMBtu	< 1	AC 49-205703

a. Tons per year based on 7760 hrs/yr for natural gas firing, 1000 hrs/yr for number 2 fuel oil firing.
b. Based on 928 MMBtu/hr for number 2 fuel oil and 869 MMBtu/hr for natural gas.
c. NO_X emission limits were permitted to be 25 ppmvd while firing natural gas until 1/1/98 via original application.
d. Limits based upon an approved emission factor, which is subject to change in the future.

B.9. Sulfur Dioxide - Sulfur Content. **The permittee elected to use fuel sampling and analysis in lieu of installing a continuous monitoring system for SO_2 as required by the NSPS.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. The permittee shall demonstrate compliance with the SO_2 limit by EPA test method 8 or fuel sampling and analysis. The permittee shall demonstrate compliance with the gaseous fuel sulfur limit via record keeping. Excess emissions shall be reported if the fuel being fired in the gas turbine exceeds 0.05% sulfur by weight.
[AC 49-205703 (PSD-FL-182)]

B.10. Fuel Sampling & Analysis - Sulfur/Nitrogen and Lower Heating Value. The following fuel sampling and analysis program shall be used to demonstrate compliance with the sulfur dioxide standard:

a. Determine and record the as-fired fuel sulfur content, percent by weight, for liquid fuels using either ASTM D2622-92, ASTM D4294-90, both ASTM D4057-88 and ASTM D129-91, or the latest editions, to analyze a representative sample of the blended fuel following each fuel delivery. ASTM D3246-81, or its latest edition, shall be used for sulfur content of gaseous fuel.

b. Record daily the amount of each fuel fired, density of each fuel, heating value, nitrogen content and the percent sulfur content by weight of fuel oil as specified in 40 CFR 60.334.

[Rule 62-213.440, F.A.C., and AC 49-205703 (PSD-FL-182)]

Monitoring of Operations

B.11 Continuous Monitoring Required. A continuous monitoring system shall be maintained to record fuel consumption. A continuous monitoring system shall be maintained to record emissions of nitrogen oxides in accordance with the requirements of 40 CFR 75. Data collected from this system shall be used for periodic monitoring purposes. While water injection is being utilized for NO_X control, water to fuel ratio and fuel bound nitrogen is not required to be continuously monitored as long as the permittee will report excess emissions using the data collected by the continuous monitoring system in accordance with the following conditions:

1. Each NO_X CEMS must be capable of calculating NO_X emissions concentrations corrected to 15% O2 and ISO conditions.
2. Monitor data availability shall be no less than 95 percent on a quarterly basis.
3. NO_X CEMS should provide at least 4 data points for each hour and calculate a one-hour average.

To implement condition 1, KUA shall use ambient data (temperature, relative humidity, pressure) to correct excess emissions data to ISO conditions if requested by the Department. If monitor availability drops below 95% on a quarterly basis as prescribed in condition 2, KUA shall use water to fuel ratio and fuel-bound nitrogen data to monitor excess emissions in subsequent quarters until the minimum CEMS monitor availability is above 95%. The use of CEMS to monitor excess emissions is more stringent than the surrogate parameter monitoring in 40 CFR 60.334 since the CEMS directly measures NO_X emissions. The CEMS also provides monitoring when no water injection is used to control NOx emissions (i.e., when firing natural gas, dry low NO_X burners are used).
[AC 49-205703 (PSD-FL-182)]

B.12. Excess Emissions by CEMS. The CEMS shall be used to determine periods of excess emissions as per 40 CFR 60.334. Excess emissions are defined for this emissions unit as any 60-

minute period during which the average emissions exceed the emission limits of specific condition **B.5.** of this permit. Excess emissions from the combustion turbine caused entirely or in part by the operation of the inlet air fogging system shall also be prohibited. Periods of startup, shutdown and malfunction shall be monitored, recorded and reported with excess emissions following the format and requirements of 40 CFR 60.7.
[AC49-205703 (PSD-FL-182); 0970043-008-AC (PSD-FL-182I); 0970043-009-AV; Revised on (DRAFT)]

Record Keeping and Reporting Requirements

B.13. Excess Emission Reports. Semi-annual excess emission reports shall be submitted to the DEP's Central District Office. These reports shall be postmarked by the 30th day following the last day of June and the last day of December. Each excess emission report shall include the information required in 40 CFR 60.7(c) and 60.334.
[AC 49-205703 (PSD-FL-182)]

B.14. Natural Gas Sulfur Content Records Required. The owner or operator shall receive and maintain records of sulfur content of natural gas provided by the natural gas supplier, as per 40 CFR 60.334. The records shall report total sulfur content in terms of grains of sulfur per hundred cubic feet (standard conditions).
[AC 49-205703 (PSD-FL-182)]

B.15. Additional Reports Required. The owner or operator shall report the following with the Annual Operating Report (AOR) by March 1 of each calendar year: sulfur and nitrogen contents, by weight, and lower heating value of the fuel oil being fired, annual fuel consumption of number 2 fuel oil and natural gas, hours of operation per fuel usage and air emission limits.
[Rule 62-210.370(3), F.A.C., and AC 49-205703 (PSD-FL-182)]

Other Conditions

B.16. Maintain Capability to install an SCR. This emissions unit is permitted for maximum NO_X emission levels of 15 (gas)/42 (oil) ppmv. The Department will revise permitted emission levels for NO_X if the manufacturer achieves an even lower NO_X emission, pursuant to F.A.C. Rule 62-4.080. The permittee shall maintain capability for future installation of a selective catalytic reduction (SCR) system. This is required in the event that the permittee is unable to comply with the permitted NO_X levels and the Department requires an SCR to be installed. In the event an SCR system is required to be installed, the emission limitations shall be established at the time of installation by stack test results and through a revised determination of BACT.
[AC 49-205703 (PSD-FL-182)]

B.17. This emissions unit is also subject to conditions **C.1.** through **C.13.** contained in **Subsection C. Common Conditions.**

B.18. This emissions unit is also subject to conditions **D.1.** through **D.6.** contained in **Subsection D. NSPS Common Conditions.**

Subsection C. Common Conditions.

E.U. ID No.	Brief Description
001	Simple Cycle Combustion Turbine Unit 1, rated at 40 MW, 367 MMBtu/hr for natural gas and 372 MMBtu/hr for number 2 fuel oil, capable of burning any combination of natural gas and number 2 fuel oil, with emissions exhausted through a 65 ft. stack .
002	Combined Cycle Combustion Turbine Unit 2, rated at 120 MW, 869 MMBtu/hr for natural gas and 928 MMBtu/hr for number 2 fuel oil, capable of burning natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack .

The following conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

C.1. Hours of Operation. Unit No. 1 shall operate no more than 5000 hours during any consecutive 12 months. Operation of Unit No. 2 is not restricted (8,760 hours/year). In addition, the combined NOx emissions of Unit Nos. 1 and 2 shall not exceed 366.1 tons during any consecutive 12 months. Compliance with this requirement shall be demonstrated each month with NOx emissions data collected from the installed CEMS. Records shall be maintained on site demonstrating compliance with this cap for each consecutive 12-month period. Additionally, the annual submittal of each Annual Operating Report shall include such data and calculations. {Permitting Note: Revised by Project No. 0970043-009-AV on (DRAFT) to incorporate previous Project No. 0970043-007-AC that modified original permit PSD-FL-182. This action set a final NOx limit for Unit No. 1 of 25 ppmvd with a corresponding reduction in annual hours of operation from 8760 to 5000 and established the NOx emissions cap.} [Rule 62-210.200(PTE), F.A.C.; 0970043-007-AC (PSD-FL-182A); 0970043-009-AV; Revised on (DRAFT)]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

Excess Emissions

{Pemitting note: The excess emissions rule at 62-210.700, F.A.C., cannot vary any requirement of a NSPS, NESHAP, or Acid Rain program provision.}

C.2. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing:

(1) best operational practices to minimize emissions are adhered to and

(2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

[Rule 62-210.700(1), F.A.C.]

C.3. 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 shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

Appendix H-1, Permit History/ID Number Changes

Permit History (for tracking purposes):

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Extended Date[1, 2]	Revised Date(s)
Unit 1	Simple Cycle Comb. Turbine, Unit 1	AC49-205703 PSD-FL-182	4/9/93	11/1/96	9/16/94, 5/8/95	
		0970043-004-AC				5/19/97
		970043-003-AC				8/15/97
Unit 2	Combined Cycle Gas Turbine, Unit 2	AC49-205703 PSD-FL-182	4/9/93	11/1/96	9/16/94, 5/8/95	
		0970043-004-AC				5/19/97
		0970043-003-AC				8/15/97
	Added inlet air fogging for Unit 2	0970043-008-AC (PSD-FL-182I)	(DRAFT)	(DRAFT)		(DRAFT)
	Added inlet air fogging for Unit 2 in initial Title V permit	0970043-009-AV	(DRAFT)	(DRAFT)		(DRAFT)

ID Number Changes (for tracking purposes):

From: **Facility ID No.:** 30ORL490043

To: **Facility ID No.:** 0970043

Notes:
1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.
{Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}

{Permitting Note: Revised by Project No. 0970043-009-AV on (DRAFT).}

Appendix S
Permit Summary Tables

Table 1-1, Summary of Air Pollutant Emission Standards

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emiss Unit	Brief Description
001	Simple Cycle Gas Turbine, Unit 1, rated at 40 MW.

			Allowable Emissions[a]			Equivalent			
Poilutant	Fuel(s)	Hours	Standard(s)	lb/hr	TPY	lb/hr	TPY	Regulatory	See Permit
VE	No 2 Oil Nat Gas	5000	10 % opacity					AC 49-205703	A.4.
SO_2	No 2 Oil Nat Gas	1000	0.05% S by weight, fuel oil	20			10	AC 49-205703	A.9., A.10., A.13.
NO_X	No. 2 Fuel Oil	1000	42 ppmvd at 15% oxygen on a dry	63			31.5	AC 49-205703	A.15.
NO_X	Natural Gas	5000	25~~/15~~ ppmvd at 15% oxygen dry	22			44.0	AC 49-205703	A.15.
PM	No. 2 Fuel Oil	1000	0.0323 lb/MMBtu			12.0	6.0	AC 49-205703	A.5., A.7.
PM	Natural Gas	5000	0.0245 lb/MMBtu			9	18.0	AC 49-205703	A.5., A.7.
VOC	No. 2 Fuel Oil	1000	3 lb/hour	3			1.5	AC 49-205703	A.5., A.7.
VOC	Natural Gas	5000	1.4 lb/hour	1.4			2.8	AC 49-205703	A.5., A.7.
CO	No. 2 Fuel Oil	1000	63 ppmvd at 15% oxygen on a dry	76			38	AC 49-205703	A.5., A.7.
CO	Natural Gas	5000	30 ppmvd at 15% oxygen on a dry	40			80.0	AC 49-205703	A.5., A.7.
Hg	No. 2 Fuel Oil	1000	3.1e-6 lb/MMBtu			<1	<1	AC 49-205703	A.5.
As	No. 2 Fuel Oil	1000	4.2e-6 lb/MMBtu			<1	<1	AC 49-205703	A.5.
Be	No. 2 Fuel Oil	1000	2.5e-6 lb/MMBtu			<1	<1	AC 49-205703	A.5.
Pb	No. 2 Fuel Oil	1000	2.8e-5 lb/MMBtu			<1	<1	AC 49-205703	A.5.

Notes for EU 001:

a lb/hour and TPY values based on using number 2 fuel oil for 1000 hours per year; for natural gas using 4000 hours per year.

l The "Equivalent Emissions" listed are for informational purposes only. They are based upon 4000 hours per year of gas operation and 1000 hours per year of #2 oil operation. [Rule 62-213.205, F.A.C.]

* Firing of number 2 fuel oil is limited to no more than 1000 hours per year to the unit for any reason.

{Permitting Note: Emissions Units 001 and 002 have a combined NOx emissions cap of 366.1 during any consecutive 12 months. Last revised by Project No. 0970043-009-AV on (DRAFT).}

Appendix S
Permit Summary Tables

Emiss Unit	Brief Description
002	Combined Cycle Gas Turbine, Unit 2, rated at 120 MW.

			Allowable Emissions[a]			Equivalent			
Pollutant	Fuel(s)	Hours	Standard(s)	lb/hr	TPY	lb/hr	TPY	Regulatory	See Permit
VE	No 2 Oil Nat Gas	8760	10 % opacity					AC 49-205703	A.4.
SO_2	No 2 Oil Nat Gas	1000	0.05% S by weight, fuel oil	52			26	AC 49-205703	A.9., A.10., A.13.
NO_X	No. 2 Fuel Oil	1000	42 ppmvd at 15% oxygen on a dry	170			85.0	AC 49-205703	A.15.
NO_X	Natural Gas	8760	15 ppmvd at 15% oxygen on a dry	53			205.6	AC 49-205703	A.15.
PM	No. 2 Fuel Oil	1000	0.0162 lb/MMBtu			15.0	7.5	AC 49-205703	A.5., A.7.
PM	Natural Gas	8760	0.0100 lb/MMBtu			8.7	33.7	AC 49-205703	A.5., A.7.
VOC	No. 2 Fuel Oil	1000	5.0 lb/hour	5			2.5	AC 49-205703	A.5., A.7.
VOC	Natural Gas	8760	2.0 lb/hour	2			7.76	AC 49-205703	A.5., A.7.
CO	No. 2 Fuel Oil	1000	20 ppmvd at 15% oxygen on a dry	65			32.5	AC 49-205703	A.5., A.7.
CO	Natural Gas	8760	20 ppmvd at 15% oxygen on a dry	54			209.5	AC 49-205703	A.5., A.7.
Hg	No. 2 Fuel Oil	1000	3.0e-6 lb/MMBtu			<1	<1	AC 49-205703	A.5.
As	No. 2 Fuel Oil	1000	4.2e-6 lb/MMBtu			<1	<1	AC 49-205703	A.5.
Be	No. 2 Fuel Oil	1000	2.5e-6 lb/MMBtu			<1	<1	AC 49-205703	A.5.
Pb	No. 2 Fuel Oil	1000	2.8e-5 lb/MMBtu			<1	<1	AC 49-205703	A.5.

Notes for EU 002:

a lb/hour and TPY values based on using number 2 fuel oil for 1000 hours per year; for natural gas using 7760 hours per year.

1 The "Equivalent Emissions" listed are for informational purposes only. They are based upon 7760 hours per year of gas operation and 1000 hours per year of #2 oil operation. [Rule 62-213.205, F.A.C.]

* Firing of number 2 fuel oil is limited to no more than 1000 hours per year to the unit for any reason.

{Permitting Note: Emissions Units 001 and 002 have a combined NOx emissions cap of 366.1 during any consecutive 12 months. Last revised by Project No. 0970043-009-AV on (DRAFT).}

Appendix S
Permit Summary Tables

Table 2-1, Summary of Compliance Requirements

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit	Brief Description
001	Simple Cycle Combustion Turbine, Unit 1, rated at 40 MW.

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date[1]	Minimum Compliance Test Duration	CMS[2]	See Permit Condition(s)
VE	No 2 Fuel Oil, Nat. Gas	EPA Method 9	Annual	August 1st	1 hour	No	A.6.
SO_2	"	Method 8 for Fuel oil firing only; Fuel Sampling & Analysis	As Fired			Yes*	A.9, A.10.
NO_x	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	A.6.
PM	"	EPA Test Methods 5 or 17	Only if 10% Opacity is exceeded		3 hours	No	A.7.
VOC	"	EPA Test Method 25A	Initial Compliance			No	A.7.
CO	"	EPA Test Method 10	Annual			No	A.7.
Hg	No.2 oil	EPA Method 101 or fuel sampling	Initial Compliance			No	A.5.
As	No.2 oil	Fuel sampling	Initial Compliance			No	A.5.
Be	No.2 oil	EPA Method 104 or fuel sampling	Initial Compliance			No	A.5.
Pb	No.2 oil	Fuel sampling	Initial Compliance			No	A.5.

Notes for EU 001:

* Continuous monitoring of fuel consumption required.
[1] Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.
[2] CMS = continuous monitoring system
See also Section C for general testing requirements

{Permitting Note: Emissions Units 001 and 002 have a combined NOx emissions cap of 366.1 during any consecutive 12 months. Compliance must be demonstrated monthly by CEMS data. Last revised by Project No. 0970043-009-AV on (DRAFT).}

Appendix S
Permit Summary Tables

Emissions Unit	Brief Description
002	Combined Cycle Combustion Turbine, Unit 2, rated at 120 MW.

Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date[1]	Minimum Compliance Test Duration	CMS[2]	See Permit Condition(s)
VE	No 2 Fuel Oil, Nat. Gas	EPA Method 9	Annual	August 1st	1 hour	No	B.6.
SO_2	"	Method 8 for Fuel oil firing only; Fuel Sampling & Analysis	As Fired			Yes*	B.9, B.10.
NO_x	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	B.6.
PM	"	EPA Test Methods 5 or 17	Only if 10% Opacity is exceeded		3 hours	No	B.7.
VOC	"	EPA Test Method 25A	Initial Compliance			No	B.7.
CO	"	EPA Test Method 10	Annual			No	B.7.
Hg	No.2 oil	EPA Method 101 or fuel sampling	Initial Compliance			No	B.5.
As	No.2 oil	Fuel sampling	Initial Compliance			No	B.5.
Be	No.2 oil	EPA Method 104 or fuel sampling	Initial Compliance			No	B.5.
Pb	No.2 oil	Fuel sampling	Initial Compliance			No	B.5.

Notes for EU 002:

* Continuous monitoring of fuel consumption required.
[1] Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.
[2] CMS = continuous monitoring system
See also Section F for general testing requirements.

{Permitting Note: Emissions Units 001 and 002 have a combined NOx emissions cap of 366.1 during any consecutive 12 months. Compliance must be demonstrated monthly by CEMS data. Last revised by Project No. 0970043-009-AV on (DRAFT).}

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

KISSIMMEE UTILITY AUTHORITY
CANE ISLAND POWER PARK

Osceola County, Florida

Unit 2 - Combined Cycle Combustion Turbine
ARMS Emissions Unit 002

ARMS Facility I.D. No. 0970043

Project No. 0970043-008-AC

PSD Permit No. PSD-FL-182I

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation
New Source Review Section

June 27, 2000

1.0 APPLICATION INFORMATION

1.1 Applicant Name and Address

Kissimmee Utility Authority
P.O. Box 423219
Kissimmee, FL 34742-3219
Authorized Representative:
A.K. Sharma, Director of Power Supply

1.2 Reviewing and Processing Schedule

06/06/00 Permit application received.
06/08/00 Department requested additional information.
06/15/00 Additional information received; application complete.

2.0 EXISTING FACILITY INFORMATION

2.1 Existing Facility Description

This facility consists of one 40 MW simple cycle combustion turbine, one 120 MW combined cycle combustion turbine, and two distillate oil storage tanks. The facility also has an air construction permit to install a 250 MW combined cycle combustion turbine, a natural gas-fired (44mmBTU/hour) heat recovery steam generator (HRSG), a cooling tower and a third distillate oil storage tank.

2.2 Facility Location

KUA - Cane Island Power Park
6075 Old Tampa Highway
Osceola County, Intercession City, Florida 34758
Kissimmee, Osceola County, Florida 34741

UTM Zone 17, 449.8 km East, 3127.9 km North

2.3 Standard Industrial Classification Codes (SIC)

Industry Group No.	-	49	-	Electric, Gas, and Sanitary Services
Industry No.	-	4911	-	Electric Services

2.4 Regulatory Categories

Power Plant Siting (PPS): The facilty is subject to a PPS certification.

Title III – HAP: Based on the initial Title V permit, this facility is a major source of hazardous air pollutants (HAPs).

Title IV - Acid Rain: Emissions units at this facility are subject to the Federal Acid Rain Program.

Title V – Major Source: The facility is classified as a "major" source of air pollution with respect to Title V of the Clean Air Act because emissions of at least one regulated criteria air pollutant exceeds 100 tons per year.

PSD Major Source: Because facility emissions of at least one criteria pollutant are greater than 250 tons per year, the facility is "major facility" with respect to the Prevention of Significant Deterioration (PSD) of Air Quality. Pursuant to Rule 62-212.400, F.A.C., each modification to a PSD major source requires a PSD applicability determination. The Department determined that PSD did not apply to the project as permitted.

NSPS: The new and existing combustion turbines are subject to 40 CFR 60, Subpart GG, the New Source Performance Standards for stationary gas turbines.

3.0 PROPOSED PROJECT

3.1 Project Description

The applicant requests a permit to authorize the installation of an inlet air fogging system on the Unit 2 combustion turbine (ARMS emission unit 002) at KUA's Cane Island Power Park. The proposed equipment is a PowerFog™ inlet air fogging system manufactured by Caldwell Energy & Environmental, Inc. (or equivalent) consisting of a series of high-pressure spray nozzles designed to inject up to 26 gpm of water in a fine mist to the compressor inlet air of the combustion turbine. The fine water droplets evaporate, absorbing heat from the air molecules during the liquid-to-vapor phase change. The cooled inlet air is made denser allowing for a higher inlet air mass throughput and increased power generation of up to 8 MW depending on the initial ambient conditions. Based on an inlet air mass flow rate of 2,077,077 pounds per hour, the inlet air fogging system will be designed to achieve a 25° F cooling reduction from an ambient temperature of 95° F to cooled compressor inlet air temperature of 70° F. The maximum heat input continues to be defined by the coldest day, because evaporative cooling provides little or no benefit on such days. Therefore, this project does not increase permitted capacity, but rather shifts operation on hot days up the power output performance curve, but within the original design range of Unit 2.

The facility is a PSD major source of air pollution. The proposed project *could* potentially result in significant increases in emissions of carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM/PM10), sulfur dioxide (SO_2), and/or volatile organic compounds (VOC). This is based on increased fuel consumption as a result of installing foggers, past actual emissions, future potential emissions, and maximum emissions rates. Therefore, the project is subject to an applicability review for the Prevention of Significant Deterioration (PSD) of Air Quality. The applicant has requested a limit on operation of the foggers to *avoid* triggering the significant emissions rates specified in Table 62-212.400-2, F.A.C. and a corresponding determination of the Best Available Control Technology (BACT).

3.2 Applicant's Estimated Project Emissions

The applicant estimated the maximum emissions increases by using the increased heat input associated with a 17° F decrease in compressor inlet temperature. Based on the heat input curve for this unit, a 17° F temperature decrease results in an increase in heat input of 27 mmBTU per hour. Combining these estimates with AP-42 pollutant emission factors provides hourly emissions rates. The following table summarizes the applicant's predicted net emissions increase for the project based on this analysis and a requested limit of 5800 hours of operation to avoid triggering PSD.

Table A. Applicant's Estimated Net Emissions Increases and Resulting PSD Applicability

Pollutant	Net Emissions Increase (TPY)	Significant Emissions Rate (Tons Per Year)	Significant? (Table 212.400-2)	Subject To BACT?
CO	16.0	100	No	No
NOx	19.4	40	No	No
PM/PM10	2.7	25/15	No	No
SO_2	1.8	40	No	No
VOC	0.7	40	No	No

Note: Based on current permit limits, past actual operation, and increase due to fogging only.

The calculated emissions increases reflect only those increases directly related to the addition of inlet air fogging. Essential to the applicant's analysis is the *assumption* that utilization of the peaking combustion turbine will not increase as a result of the ability to achieve greater power output due to the project.

4.0 DEPARTMENT'S ANALYSIS

4.1 Project Discussion

As previously described, inlet air fogging cools the compressor inlet air making it denser and allowing a higher inlet air mass throughput. Additional fuel is fired to maintain the operating temperatures with the overall result being an increase in power production of up to 8 MW for Unit 2. However, the maximum heat input continues to be defined by the coldest day because evaporative cooling provides little or no benefit on such days. Therefore, this project does not increase permitted capacity, but attempts to shift operation on warm days up the power output performance curve, but within the original design range of these units. Inlet foggers are routinely included in new combustion turbine projects and have not affected the Department's decisions regarding Best Available Control Technology.

4.2 Department's Estimated Project Emissions

The proposed project will add an inlet air fogging system designed to alter the conditions of the compressor inlet air of Unit 2. Installation of this equipment is a physical change and operation of the fogging system is considered a change in the method of operation that will result in increased actual fuel consumption and air pollutant emissions. The Department believes it is reasonable to compare the past actual to future potential emissions that would result directly from maximum heat input due to fogging. This means that the permitted emissions levels and maximum heat inputs will be used for both cases. This is consistent with the Department's previous determinations for similar inlet air fogging projects. However, critical to this analysis is the assumption that installation of this equipment will not increase the availability or utilization of the existing combustion turbine over that of recent years. To establish the recent operating history for the combustion turbines, the Department reviewed the Title V Fee Reports submitted by the applicant for the last two years, as summarized in the following table.

Table B. Operating History for Previous 2-Years

Year	Total Hour/Year	Gas Firing Hour/Year	Oil Firing Hour/Year
1999	8230	8229	1
1998	7368	7339	29
Average	7799	7784	15

A review of the operating history for this unit indicated and average operation of 7799 hours per year for 1998 and 1999, showing Unit 2 to be a base loaded unit. Of this total, Unit 2 averaged only 15 hours per year of oil firing. Therefore, the Department does not believe that installation of this equipment would make Unit 2 more available. For the PSD applicability analysis, NOx was determined to be the limiting pollutant. The Department disagreed with the applicant's use of the same emission factors and hours of operation to evaluate the past actual to future potential emissions for the fogger project. Instead, the Department based past actual emissions on average operation over the last two years, all natural gas firing, and potential emissions on 8760 hours per year, as summarized in the following table.

Table C. Department 's Estimated Net Emissions Increases

			Increase ONLY	Past Actuals	Future Potentials	Net Increase	Significant? Yes / No
	mmBTU/hr ---------->		63	782	845	NA	NA
	hr/yr ---------->		7760	7799	8760	NA	NA
Pollutant	lb/hr	lb/mmBTU	TPY	TPY	TPY	TPY	NA
CO	54.0	0.0621	15.18	189.37	229.84	40.47	No
NOx	53.0	0.0610	14.91	186.01	225.77	39.75	No
PM10	8.7	0.0100	2.44	30.49	37.01	6.52	No
SO2	1.2	0.0014	0.34	4.27	5.18	0.91	No
VOC	2.0	0.0023	0.56	7.01	8.51	1.50	No

The isolated net increase is estimated based on the ability to fire additional fuel during hot weather than would normally be possible. The design heat input (and permit limit) for gas firing is 869 mmBTU at ISO conditions (59° F and 60% RH, LHV) as specified by the permit. According to the manufacturer's performance curve provided by the applicant, the unit would only be capable of firing 90% of the design heat input at an ambient inlet temperature of 95° F. If inlet fogging was added, the inlet temperature would be reduced to approximately 70° F and up to 97% of the design heat input could be fired resulting in a power boost for the given ambient conditions. The heat input increase is approximately 63 mmBTU per hour. Clearly, the isolated net emissions increase is less than the Significant Emissions Rates of Table 62-212.400-2. Although the analysis is based on the assumption of 100% gas firing, the Department believes the assumption justified due to the recent operating history.

As an additional check, the Department also estimated the net potential emissions increase from the fogging project alone based on 7760 hours of gas firing, 1000 hours of oil firing, permit emissions levels, and the maximum heat input due to fogging. This analysis indicates a maximum net emissions increase of just over 20 tons of NOx per year, or about half of the significant emission rate for NOx. Therefore, based on these analyses, the project is considered a minor modification with respect to PSD.

4.3 PSD Review

As a PSD major source, a modification or change in method of operation of the combustion turbine resulting in **significant net emissions increases** is subject to PSD review. A significant net emissions increase is defined in Rule 62-212.400, F.A.C as follows:

"Significant Net Emissions Increase" – A significant net emissions increase of a pollutant regulated under the Act is a ***net emissions increase*** *equal to or greater than the applicable significant emission rate listed in Table 212.400-2, Regulated Air Pollutants – Significant Emission Rates.*

The significant emission rates are included Tables A and B above. The meaning of a net emissions increase is given in Rule 62-212.400, F.A.C. as follows:

"Net Emissions Increase" - A modification to a facility results in a net emissions increase when, for a pollutant regulated under the Act, the sum of all of the contemporaneous creditable increases and decreases in the ***actual emissions*** *of the facility, including the increase in emissions of the modification itself and any increases and decreases in quantifiable fugitive emissions, is greater than zero.*

The definition of actual emissions is given in Rule 62-210.200, F.A.C. (definitions) as follows:

"Actual Emissions" - The actual rate of emission of a pollutant from an emissions unit as determined in accordance with the following provisions:

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit. Actual emissions shall be calculated using the emissions unit's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

(b) The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that, for any regulated air pollutant, such unit-specific allowable emissions limits are federally enforceable.

*(c) For any emissions unit (other than an electric utility steam-generating unit specified in subparagraph (d) of this definition) which has not begun **normal operations** on a particular date, actual emissions shall equal the **potential emissions** of the emissions unit on that date.*

The term "normal operations" appears to be undefined and subject to some interpretation. Potential emissions are defined in Rule 62-210.200, F.A.C. (definitions) as follows:

"Potential Emissions or Potential to Emit" - The maximum capacity of an emission unit or facility to emit a pollutant under its physical and operational design. Any enforceable physical or operational limitation on the capacity of the emission unit or facility to emit a pollutant, including any air pollution control equipment and any restrictions on hours of operation or on the type or amount of material combusted, stored, or processed shall be treated as part of its design provided that, for any regulated air pollutant, such physical or operational limitation is federally enforceable.

As shown in the operating history presented above, the combustion turbine has begun normal operations and serves as a base loaded unit. Therefore, a comparison of past actual to future potential emissions would be based on the average of two years actual operation and full permitted operation after installation of the foggers. If a larger unit were replacing the existing unit, such a comparison would undoubtedly result in a determination that PSD is applicable, unless the company took an extreme limitation in hours of operation. If a like-kind replacement were being made, the same comparison would also result in a determination that PSD is applicable. For purposes of comparison with the proposed project, this last case was addressed in the Puerto Rican Cement Decision. This is the watershed decision made by the Federal Circuit Court of Appeals that upheld the past actual to future potential emission comparison for modernization projects. The following excerpt from this decision is of interest with regard to the present project:

"One can imagine circumstances that might test the reasonableness of EPA's regulation. An electricity company, for example, might wish to replace a peak load generator -- one that operates only a few days per year -- with a new peak load generator that the firm could, but almost certainly will not, operate every day. And, uncertainties about the precise shape of future electricity peak demand might make the firm hesitate to promise EPA it will never increase actual emissions (particularly since EPA insists, as a condition of accepting the promise and issuing the NAD, that the firm also promise not to apply for permission for an actual increase under the PSD review process). Whatever the arguments about the "irrationality" of EPA's interpretation in such circumstances, however, those circumstances are not present here. The Company is not interested in peak load capacity; it operated its old kilns at low levels in the past; its new, more efficient kiln might give it the economic ability to increase production; consequently, EPA could plausibly fear an increase in actual emissions were it to provide the NAD. Thus, this seems the very type of case for which the regulations quoted above were written. We can find nothing arbitrary or irrational about EPA applying those regulations to the Company's proposal."

The current fogger project is yet another step removed from the modernization project described in the above like-kind replacement example. The combustion turbine will not be replaced at all. The modification and its effects can be isolated and directly estimated. The combustion turbine has begun normal operation and emissions prior to the project should be based on past actual emissions. However, inlet air fogging has not yet begun normal operation and future actual emissions should be based on potential emissions including any restrictions on the operation of the foggers.

The applicant believes that no permit restrictions are necessary to avoid triggering PSD applicability and a corresponding BACT determination. After further analysis, the Department's came to the same conclusion. Therefore, this project is considered a minor modification with respect to PSD. The Draft Permit authorizes the inlet air fogging system with to no restrictions on hours of operation.

4.4 Air Quality Impact Analysis

Because this project does not trigger PSD, no air quality impact analysis was conducted. The Department believes that because the proposed project will not result in an increase in the maximum hourly emission rates, there will be no change in any predicted ambient impacts. Therefore, issuance of this permit would not adversely affect the results of any previous Air Quality Analysis.

5.0 CONCLUSION

Based on the Department's technical review of the complete application, the reasonable assurances provided by the applicant, and the conditions specified in the Draft Permit, the Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations. The proposed project, as permitted, will not result in significant annual net emissions increases or increase the maximum actual hourly emissions rates. The Department's conclusion is specific to the proposed project and does not set a precedent for any future projects or other types of physical changes to combustion turbines such as compressors, combustors, rotors, etc. The Department's determination does not constitute an interpretation of the EPA rules under 40 CFR 52.21, Prevention of Significant Deterioration or 40 CFR 60, New Source Performance Standards. Jeff Koerner, P.E., is the permitting engineer responsible for reviewing the application and drafting the permit.

DRAFT PERMIT

PERMITTEE

Kissimmee Utility Authority (KUA)
P.O. Box 423219
Kissimmee, FL 34742-3219

Authorized Representative:
A.K. Sharma, Director of Power Supply

Plant Site:	Cane Island Power Park
Facility ID No.	0970043
SIC No.	4911
Project No.	0970043-008-AC
Project:	Inlet Air Fogging System
Permit No.	PSD-FL-182I
Expires:	July 1, 2001

PROJECT AND LOCATION

This permit is for the installation of a high-pressure direct spray inlet air fogging system on an existing 120 MW combined cycle combustion turbine (Emissions Unit 002) at KUA's Cane Island Power Park. The plant is located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida 34758. The UTM map coordinates are Zone 17, 449.8 km East, 3127.9 km North. This permit is issued pursuant to the preconstruction review requirements of Chapter 62-212, F.A.C. The facility is an electric power generating plant and major source of air pollution with respect to Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality program. The proposed project will increase actual emissions of an existing combustion turbine. However, the net emissions increases have been determined to be less than the significant emission rates specified in Table 62-212.400-2, F.A.C. Therefore, PSD does not apply to this project.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit does not alter any requirements from previously issued air permits for the subject emissions unit.

APPENDICES

The following appendices are attached as part of this permit.

Appendix A - Terminology
Appendix B - Summary of the PSD Applicability Determination
Appendix GC - Construction Permit General Conditions

(DRAFT)

Howard L. Rhodes, Director
Division of Air Resources Management

FACILITY DESCRIPTION

This facility consists of one 40 MW simple cycle combustion turbine, one 120 MW combined cycle combustion turbine, and two distillate oil storage tanks. The facility also has an air construction permit to install a 250 MW combined cycle combustion turbine, a natural gas-fired (44mmBTU/hour) heat recovery steam generator (HRSG), a cooling tower and a third distillate oil storage tank.

PROJECT

The proposed project adds an inlet air fogging system to the following existing emissions unit.

ARMS ID No.	EMISSION UNIT DESCRIPTION
002	Unit 2 – A 120 MW combined cycle combustion turbine

REGULATORY CLASSIFICATION

Power Plant Siting (PPS): The facilty is subject to a PPS certification.

Title III – HAP: Based on the initial Title V permit, this facility is a major source of hazardous air pollutants (HAPs).

Title IV - Acid Rain: Emissions units at this facility are subject to the Federal Acid Rain Program.

Title V – Major Source: The facility is classified as a "major" source of air pollution with respect to Title V of the Clean Air Act because emissions of at least one regulated criteria air pollutant exceeds 100 tons per year.

PSD Major Source: Because facility emissions of at least one criteria pollutant are greater than 250 tons per year, the facility is "major facility" with respect to the Prevention of Significant Deterioration (PSD) of Air Quality. Pursuant to Rule 62-212.400, F.A.C., each modification to a PSD major source requires a PSD applicability determination. The Department determined that PSD did not apply to the project as permitted.

NSPS: The existing combined cycle combustion turbine is subject to 40 CFR 60, Subpart GG, the New Source Performance Standards for stationary gas turbines.

RELEVANT DOCUMENTS

- Permit application received June 6, 2000.
- Additional information received on June 15, 2000.

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct or modify this emissions unit shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. Copies of these documents shall be submitted to each Compliance Authority.

2. Compliance Authorities: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the Central District Office at 3319 Maguire Boulevard, Suite 232 in Orlando, Florida 32803-3767. The phone number is 407/894-7555 and the fax number is 407/897-2966.

3. Terminology: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. *Appendix A* lists frequently used abbreviations and explains the format used to cite rules and regulations in this permit.

4. PSD Applicability Determination: *Appendix B* summarizes the Department's determination of PSD applicability for this project.

5. General Conditions: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

6. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of this project shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

7. Permit Expiration: For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C]

8. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

9. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

10. Title V Permit: This permit authorizes construction of the proposed project and initial operation to determine compliance with Department rules. Upon completion of construction of this project, a Title V operation permit revision is required for regular operation of the new equipment. The permittee shall apply for and receive a revised Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232 in Orlando, Florida 32803-3767. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

The proposed project adds an inlet air fogging system to the following existing emissions unit.

ARMS ID NO.	EMISSION UNIT DESCRIPTION
002	**Unit No. 2** is a combined cycle gas turbine consisting of an 80 MW General Electric Model PG 7111(EA) with an unfired heat recovery steam generator (HRSG) providing an additional 40 MW. The maximum heat input is 869 mmBTU/hr when firing natural gas and 928 mmBTU/hr when firing low sulfur distillate oil. Nitrogen oxide emissions are controlled by dry low-NOx combustion design for gas firing and by water injection for oil firing. Emissions exhaust through a stack that is 75 feet above ground level. An inlet air fogging system provides evaporative cooling of the compressor inlet air.

ADMINISTRATIVE REQUIREMENTS

1. Previous Permit Conditions: This permit authorizes the installation of a new inlet air fogging system designed to lower the inlet air compressor temperature of Unit 2. The following conditions are in addition to those of original PSD Permit No. PSD-FL-182 issued for the combined cycle gas turbine. Issuance of this permit *does not* alter any requirements from any previously issued air construction or Title V operation permits.

INSTALLATION OF EQUIPMENT

2. Inlet Air Fogging System: The permittee is authorized to install a PowerFog™ high pressure, direct water spray fogging system manufactured by Caldwell Energy & Environmental, Inc. (or equivalent). The proposed equipment will inject up to 26 gpm from spray nozzles provide evaporative cooling of the compressor inlet air to Unit 2. Based on an inlet air mass flow rate of 2,077,077 pounds per hour, the inlet air fogging system shall be designed to achieve a 25° F cooling reduction from an ambient temperature of 95° F to cooled compressor inlet air temperature of 70° F. [Design, Applicant Request]

   Permitting Note: Typically, the inlet air fogging system will operate during periods of peak power demand and high ambient temperatures. Fogging provides evaporative cooling of the inlet air to the compressor, which allows a higher mass flow rate with a corresponding increase in power production of up to 8 MW for the given ambient conditions. The increased power production is realized by firing additional fuel, which results in increased actual emissions. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows performance of the combustion turbine at a lower temperature than the existing ambient conditions.

3. Unconfined Particulate Emissions: During the construction period, unconfined particulate emissions shall be minimized by dust suppressing techniques such as covering, enclosing, applying water or chemicals to the affected areas, or any combination of techniques, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

PERFORMANCE REQUIREMENTS

4. Hours of Operation: Operation of the inlet air fogging system is not restricted (8760 hours per year). This is based on the PSD applicability review as summarized in Appendix B. [Design; Rule 62-212.400, F.A.C. (BACT); Rule 62-210.200, F.A.C. (Definitions - PTE)]

5. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of this permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Compliance Authority as soon as possible, but at least within one (1) working day, excluding weekends

and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

6. Circumvention: The permittee shall not circumvent any air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

7. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited. Excess emissions from the combustion turbine caused entirely or in part by the operation of the inlet air fogging system shall also be prohibited. [Rule 62-210.700, F.A.C.]

EMISSIONS PERFORMANCE TESTING

8. Special Compliance Tests: The existing Unit 2 combustion turbine remains subject to all performance testing provisions specified in any previously issued air construction and Title V operation permits. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTS

9. Excess Emissions Reporting: If excess emissions occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

10. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

APPENDIX A - TERMINOLOGY

ABBREVIATIONS AND ACRONYMS

°F	-	Degrees Fahrenheit
DEP	-	State of Florida, Department of Environmental Protection
DARM	-	Division of Air Resource Management
EPA	-	United States Environmental Protection Agency
F.A.C.	-	Florida Administrative Code
F.S.	-	Florida Statute
SOA	-	Specific Operating Agreement
UTM	-	Universal Transverse Mercator
CT	-	Combustion Turbine
DB	-	Duct Burner
HRSG	-	Heat Recovery Steam Generator
DLN	-	Dry Low-NOx Combustion Technology
SCR	-	Selective Catalytic Reduction
OC	-	Oxidation Catalyst Technology for CO Control

RULE CITATIONS

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

Florida Administrative Code (F.A.C.) Rules:

Example: **[Rule 62-213.205, F.A.C.]**

Where:

62	-	refers to Title 62 of the Florida Administrative Code (F.A.C.)
62-213	-	refers to Chapter 62-213, F.A.C.
62-213.205	-	refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

Example: Facility ID No. 099-0001

Where:

099	-	3 digit number indicates that the facility is located in Palm Beach County
0221	-	4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example: Permit No. 099-2222-001-AC or 099-2222-001-AV

Where:

AC	-	identifies permit as an Air Construction Permit
AV	-	identifies permit as a Title V Major Source Air Operation Permit
099	-	3 digit number indicates that the facility is located in Palm Beach County
2222	-	4 digit number identifies a specific facility
001	-	3 digit sequential number identifies a specific permit project

Old Permit Numbers:

Example: Permit No. AC50-123456 or AO50-123456

Where:

AC	-	identifies permit as an Air Construction Permit
AO	-	identifies permit as an Air Operation Permit
123456	-	6 digit sequential number identifies a specific permit project

SECTION IV.

APPENDIX B - SUMMARY OF THE PSD APPLICABILITY DETERMINATION

Project Description: The applicant requested a permit authorizing installation of an inlet air fogging system on the existing Unit 2 combined cycle combustion turbine at KUA's Cane Island Power Park. The project would provide an increase power output of up to 8 MW depending on the given ambient conditions. With inlet air fogging, a series of high-pressure spray nozzles add a fine mist to the compressor inlet air of the combustion turbine. The fine water droplets evaporate, absorbing heat from the air molecules during the liquid-to-vapor phase change. The cooled inlet air is made denser allowing for slightly higher air mass throughput and increased power generation. The maximum heat input continues to be defined by the coldest day, because evaporative cooling provides little or no benefit on such days. Therefore, this project does not increase permitted capacity, but rather shifts operation on hot days up the power output performance curve, but within the original design range of Unit 2. Inlet foggers are routinely included in new combustion turbine projects and have not affected the Department's decisions regarding Best Available Control Technology.

The facility is a PSD major source of air pollution and the proposed project could potentially result in significant increases in pollutant emissions of CO, NOx, PM/PM_{10}, SO_2, and/or VOC. Therefore, the project is subject to review for the Prevention of Significant Deterioration (PSD) of Air Quality. The applicant has requested no limit on operation of the foggers because emission levels for continuous operation remain below the significant emissions rates specified in Table 62-212.400-2, F.A.C. Therefore, PSD would not apply to the project and a determination of the Best Available Control Technology (BACT) is not required.

Summary of the PSD Applicability Review: The proposed project will add an inlet air fogging system designed to alter the conditions of the compressor inlet air of Unit 2. Installation of this equipment is a physical change and operation of the fogging system is considered a change in the method of operation that will result in increased actual fuel consumption and air pollutant emissions. The Department believes it is reasonable to compare the past actual to future potential emissions that would result directly from maximum heat input due to fogging. This means that the permitted emissions levels and maximum heat inputs will be used for both cases. This is consistent with the Department's previous determinations for similar inlet air fogging projects. However, critical to this analysis is the assumption that installation of this equipment will not increase the availability or utilization of the existing combustion turbine over that of recent years.

A review of the operating history for this unit indicated and average operation of 7799 hours per year for 1998 and 1999, showing Unit 2 to be a base loaded unit. Of this total, Unit 2 averaged only 15 hours per year of oil firing. Therefore, the Department does not believe that installation of this equipment would make Unit 2 more available. For the PSD applicability analysis, NOx was the limiting pollutant. The Department's comparison of past actual to future potential emissions indicated that continuously operating the foggers would result in a net emissions increase just below the NOx significant emission rate of 40 tons per year. The analysis was based on permit emissions limits, past actual operation, the assumption that all past operation was gas firing, and 8760 hours per year of potential gas firing. The result is a very conservative estimate of potential emissions because fogging is only needed during periods of peak power demand and high ambient temperatures.

As an additional check, the Department also estimated the net potential emissions increase based on 7760 hours of gas firing, 1000 hours of oil firing, permit emissions levels, and the maximum heat input due to fogging. This analysis indicates a maximum net emissions increase of just over 20 tons of NOx per year, or about half of the significant emission rate for NOx. Therefore, based on these analyses, the project is considered a minor modification with respect to PSD. See the Technical Evaluation and Preliminary Determination for complete details of this determination.

Air Quality Impact Analysis: Because PSD does not apply to this project, an Air Quality Analysis is not required. The proposed addition of inlet air foggers is not expected to increase the maximum hourly emission rates, so there should be no change in the maximum predicted ambient impacts. Therefore, issuance of this permit would not adversely affect the results of any previous modeling scenarios.

APPENDIX GC - CONSTRUCTION PERMIT GENERAL CONDITIONS

G.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.

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

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and 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 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.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment 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.

G.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.

G.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.

G.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 and 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.

G.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.

G.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 extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.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.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, 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.

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

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

G.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 or 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; and
6. The results of such analyses.

G.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.

Environmental Radiation Studies
Environmental Impact Studies
Radiation Dose Modeling
Risk Assessment

Perigee
Technical Services, Inc.

Atmospheric Dispersion Modeling
Air Pollution Permitting
Landscape Design
Graphic Arts

June 14, 2000

Mr. Jeffery F. Koerner, P. E.
Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Addition of Inlet Fogging System to Unit No. 2
Kissimmee Utility Authority
Cane Island Power Park - Unit 2 - Project Number: 0970043-008-AC

Dear Mr. Koerner:

This is in response to your request for additional information dated June 8, 2000 regarding the above referenced project.

1. Please identify the proposed manufacturer, model, and description of the inlet fogging system. Is the proposed model a high-pressure direct spray system? What is the approximate water flow rate (gpm) injected to produce evaporative cooling from 95° F to 70° F under base load conditions? Please provide manufacturer specification sheets on the proposed product.

I have attached technical information provided by Caldwell Energy & Environmental, Inc. which describes the operation of their PowerFog inlet fogging system. The system is a high-pressure system operating at about 26 gallons per minute water flow.

2. The original PSD permit limits heat input for gas firing to 869 mmBTU per hour and 928 mmBTU per hour for oil firing at ISO conditions and base load according to the manufacturer's design. The emission summary tables provided with the application indicate that the maximum heat input would increase to 934 mmBTU per hour for gas firing and 993 mmBTU per hour for oil firing. However, the General Electric performance curve for the Model PG7211(EA) gas turbine shows that only 90% of the design fuel consumption rate can be achieved at a compressor inlet air temperature of 95° F for both gas and oil firing. This suggests that the maximum heat input rates for gas and oil firing at 95° F would be 782 and 835, respectively. In addition, cooling the inlet air to 70° F would result in increases of the maximum fuel consumption rates to 97% of the maximum design rate or 845 and 900 mmBTU per hour for gas and oil firing, respectively. Therefore, the heat inputs would increase to:

3214 Deer Chase Run, Longwood, Florida 32779-3173
Telephone (407) 333-7374 FAX (407) 333-9396

Fuel	Design mmBTU/hour	Maximum @ 95° F mmBTU/hour	Maximum @ 70° F mmBTU/hour	Net Increase mmBTU/hour
Gas Firing	869	782 (90%)	845 (97%)	63
Oil Firing	928	835 (90%)	900 (97%)	65

The addition of the inlet foggers would not result in an increase in the design heat input rates or permit limits, which were based on ISO conditions and based load operation. Please respond.

The information provided in the application was patterned after a previous inlet fogger application. This application does not propose to increase the maximum heat input rates above those which are currently permitted or above the design rates for Unit 2. The information was provided to demonstrate the quantity of emissions increase which could result from the operation of the fogger continuously. We concur with your alternative analysis.

3. Does the heat recovery steam generator for the 120 MW combined cycle gas turbine include duct firing? If so, what fuel is fired and what is the maximum heat input rate (mmBTU per hour)?

The heat recovery steam generator for the 120 MW combined cycle gas turbine does not include duct firing.

4. Attached are emissions calculations performed by the Department for the requested modification. Please review and comment.

We concur with the emissions calculations and note that restrictions on the hours of operation of the fogger are not necessary to assure that the PSD significance thresholds are not exceeded.

5. Unit No. 2 was originally permitted under PSD-FL-182 issued on March 31, 1995. The addition of inlet fogging will be a modification of the PSD permit and will require a 30-day comment period with the Public Notice. Is this facility also subject to power plant site certification?

We acknowledge the public notice requirement. This facility is subject to power plant site certification.

Please call me at (407) 333-7374 if you have any questions regarding this submittal.

Very truly yours,

PERIGEE TECHNICAL SERVICES, INC.

Jerome J. Guidry, P.E., Q.E.P.
President

JJG:emc

cc: A. K. Sharma
Jeff Ling
Larry Mattern

cc: CD
EPA
NPS

Enclosures

via Federal Express - Airbill number 8132 1390 6743

SUPPLY AND INSTALLATION OF AN INLET MISTING SYSTEM

ITN#204-00

At the

Cane Island Power Park Project

POWERFog

FIRM PROPOSAL for 25 Degrees F(Inclusive Overspray)

SUBMITTED TO:

Kissimmee Utility Authority (KUA)
1701 West Carroll Street
Kissimee, Florida 34741

BY:

Caldwell Energy & Environmental, Inc.
4020 Tower Road
Louisville, KY 40219, USA
(502) 964-6450
Contracts P.O.C. - Drew Wozniak

January 3, 2000

CALDWELL ENERGY & ENVIRONMENTAL, INC.

POWERFog System Proposal
January 3, 2000
Project Number: P991208-1

Kissimee Utility Authority (KUA)
Cane Island Power Park
GE Frame 7EA

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1.0 Introduction

Thank you for giving us the opportunity to propose our PowerFog Combustion Turbine Inlet Air Cooling (CTIAC) system for use at your plant. CE&E personnel have many years of experience in engineering and installing cooling systems in power plants. CE&E was formed in 1995 to pursue the CTIAC market. Our owners and managers come from such respected company names as GE Power Systems, Henry Vogt Machine Company, Vogt/Turbo Refrigeration Equipment, American Air Filter, Stewart & Stevenson, Allison Gas Turbines, the Army Corp of Engineers, and the Department of the Navy. We have successfully installed fogging systems at many plants in the US and have been developing international projects as well. All of our systems are designed to industrial grade standards. We are intimately familiar with the power plant environment.

The goal of this proposal is to give you a general understanding of what a PowerFog system is, how it works, and to offer you the most economical pricing possible. For your convenience, if you have any questions or require further information. Please do not hesitate to contact:

Drew Wozniak or Joe Nitzken, P.E.
Director Business Development or Director of Project Engineering
Caldwell Energy & Environmental, Inc.
4020 Tower Road
Louisville, KY 40219
Phone: 502.964.6450
Fax: 502.964.7444
Email: dwoz@caldwellenergy.com or jnitzken@caldwellenergy.com
Pagers: 888.962.3534 or 888.259.1435

2.0 General System Description

PowerFog systems spray controlled amounts of microfine droplets into the inlet air flow of gas turbines. The fog particles evaporate, cooling the air adiabatically. This has the effect of both increasing the gas turbines output and, increasing the efficiency of the power generated (less fuel per KWh output). It also has the effect of decreasing NOx. The system effectively reduces the temperature of the inlet air from the ambient dry bulb temperature to the ambient wet bulb temperature.

The "fog" is created by special nozzles proprietary to CE&E, which direct a high pressure stream of water at an impaction pin which shatters the stream into micron sized droplets. These droplets evaporate quickly and efficiently cooling the air to the turbine. Since the systems typically use demineralized water, all components that come in contact with the water are made of stainless steel. The water is supplied to the nozzles by industrial grade high pressure triplex plunger pumps. In order to control the amount of water sprayed into the inlet air, a microprocessor based PLC control system is used. It is connected to a state of the art temperature and humidity sensor (weather station) which provides the information necessary to spray appropriate amounts of water into the air to achieve complete cooling.

3.0 Plant Description

The Cane Island Power Park project consists of 1 GE Frame 7EA Combined Cycle Combustion Turbines operating in baseload mode.

4.0 Design Conditions

The PowerFog system cools from the ambient dry bulb temperature to within one degree F of the ambient wet bulb temperature. The system is able to produce more fog than that which can be evaporated from the design conditions (SEE 4.2) which is essentially overspray to be evaporated within the compressor. The following are the design conditions for the PowerFog system:

4.1	Ambient Dry Bulb Temperature	95	°F
4.2	Ambient Wet Bulb Conditions	70	°F, **(coincident design is 80° F T_{WB})**
4.3	Elevation	30	feet above sea level
4.4	Cool to within	0	°F of the Ambient Wet Bulb Temp.
4.5	Cool to	70	°F
4.6	Inlet Air Mass Flow at 70 degrees F	2,077,077	lbs. per hour per turbine

5.0 POWERFog System Specification

5.1 System Design Parameters

Using the design conditions, and our knowledge of your plant, we have arrived at the following parameters (specified per turbine):

5.1.1	Operating Pressure	3000	PSIG
5.1.2	Number of Nozzles	275	
5.1.3	Nozzle Flow Rate	0.094	GPM
5.1.4	Max. Water Consumption	26	GPM
5.1.5	Pump Skid Power Requirement	104	Amps (480V)
			NOTE: 60 Amps (480V) at 95/80 Design Point
5.1.6	Cooling Capacity	25	°F

5.1.7	Number of Pumps	3	
5.1.8	Number of Zones	6	
5.1.9	Cooling Control (+/-)	1	°F

5.2 Scope of Supply (specified per turbine)

5.2.1 High Pressure Pump Skid Assembly.
Each Turbine(s) will have a separate, independantly controlled pump skid assembly. The skids are provided with lifting provisions and hook-up termination points. Motor wiring is taken under the decking to provide protection and additional work space. Valves, regulators, pumps and motors are all made easily accessible for in-place maintenance or removal. The individual pumps or stages can be isolated electrically and mechanically at each pumps suction valve. This allows the system to continue to operate using the remaining pumps. Each Turbine will have the following pump(s):

5.2.1.1 High Pressure Pumps. The pump(s) are belt driven, high pressure triplex plunger design capable of continuous operation. A total enclosure belt guard covers both rotating pulleys and the belt at each pump. Each skid will have the following pumps:

Pump	GPM	HP Required	Motor HP Rating
1	9.31	19.13	20
2	8.27	16.99	20
3	8.27	16.99	20

NOTE: All pumps are identical. This minimizes maintenance efforts and provides interchangeability between zones and pump.

5.2.1.2 Zones.
There are 6 zones of cooling that provide complete coverage within 1 degree(s) F over the 25 degrees F cooling range between the design dry and wet bulb temperatures.
The pump to zone configuration is as follows:

Controlling Pump Number	Zone Number	Degrees of Cooling per Zone
1	1	1
1	2	2
1	3	2
1	4	4
2	5	8
3	6	8
	TOTAL Degrees	25

By configuring the zones like this, instead of having a separate pump for each zone, frequent starting and stopping of a pump is avoided, thus preventing premature wear of multiple smaller pumps. The following table illustrates a possible combination of pumps and valves which control within one degree over the entire cooling range:

Zone Control °F	Zones On
1	1

2	2
3	1,2
4	4
5	1,4
6	2,4
7	1,2,4
8	5
9	1,5
10	2,5
11	1,2,5
12	4,5
13	1,4,5
14	2,4,5
15	1,2,4,5
16	5,6
17	1,5,6
18	2,5,6
19	1,2,5,6
20	4,5,6
21	1,4,5,6
22	2,4,5,6
23	1,2,4,5,6
24	2,3,4,5,6
25	1,2,3,4,5,6

5.2.1.3 Bypassing and Recirculation System. Since the pump(s) are positive displacement type, unneeded high pressure water from inactive zones is bypassed either directly to the common pump suction header or to a corrosion resistant tank where it mixes with incoming flow on the suction side of the high pressure pumps. This mixing prevents the supply water from rising in temperature beyond safe levels. This system is custom fabricated to our exact requirements. The recirculation tank system allows the pumps to operate on a continuous basis when the system is on.

Recirculation replaces the starting and stopping of multiple smaller GPM, high RPM "feathering" pumps, which would be turning on and off during transient ambient temperatures. Only the pump, P1 (above) that is divided into three zones uses this tank. Other pumps are run as full flow and only discharge minimal relief to the tank.

5.2.1.4 Zone Control. Each zone has a motorized stainless steel ball valve which opens to establish flow to the zone. Only pump one (P1) requires this valve for discreet zone control, any additional pumps have the valves for isolation purposes. The valve selection is controlled by the PLC.

5.2.1.5 Weather Station. Each pump skid has a Vaisala HMP230 series temperature and humidity sensor mounted on it. It is considered "state of the art" in humidity measurement and utilizes a HumicapTM dewpoint sensitive capacitive probe. Humidity and ambient dry bulb temperature are measured while the wet bulb temperature is internally calculated. This information is transmitted to the PLC as the necessary weather data to perform the required psychometric calculations. The sensors are mounted in an HM 2212 solar shield to maintain their accuracy. The unit is completely Y2K compliant.

5.2.1.6 PLC. While the skid can be manually operated, each skid has a Cutler-Hammer (base bid) or Allen Bradley SLC 500TM modular hardware style programmable logic controller mounted on it. Final selection to be finalized with customer. Other manufacturers available. The PLC is programmed by CE&E engineers with ladder logic that takes the weather data from the HMP230 transmitter and calculates which zones to be turned on or off for the particular ambient conditions at that particular moment in time. The difference between dry bulb and wet bulb temperatures is recorded every 30 seconds and then time averaged over a ten (10) minute interval. The PLC requires an enable "start" signal from the CT control which allows the fogger to run only when the CT is running for automatic operation. This enable can be jumpered to permit local operation for maintenance and troubleshooting. Dry contacts are provided for both system running and system fault indication. Any DCS interface programming to be done by others. The unit is completely Y2K compliant.

5.2.1.6.1 Additional PLC parameters. As required in ITN#204-00 the PLC is capable of exchanging data with the Westinghouse WDPF plant DCS via a 4-20ma interconnection. For each parameter delivered to the DCS a separate 4-20ma signal (wire set) is required. The output signals from the PLC are brought to a terminal block in the panel, where the DCS wire can be landed. Parameters stated in the bid document are ambient RH, dry & wet bulb temperatures, stage of operation with cumulative water output and the cooling potential in degrees F, current setpoint for under or overcooling, current total water flow through the pump skid (note this is similar to toalized flow for stages).

5.2.1.7 Motors. All motors are GE, Baldor or equal in manufacture and are Totally Enclosed Fan Cooled (TEFC) with Type F insulation (rated for outdoor use). Motors are protected against overheating. They are also automatically shutdown via pressure sensors upon high or low pressure. The motors are connected to the high pressure pumps via a belt drive which is enclosed in a safety belt guard. All motors include heaters.

5.2.1.8 Piping. All piping on the pump skid is stainless steel with TIG welded fittings wherever practical (certain features require other fittings).

5.2.1.8.1 Flex Hoses. Flex hoses are used in the final connection to the pump suction and discharge ports (off H.P. regulator). The inlet hoses are reinforced and suitable for negative (suction) inlet systems. The hoses aid in dampening pressure pulsations resulting from the inherent flow variations produced in reciprocating pumps. Pulsation dampeners are also provided on the pump discharge side.

5.2.1.9 Sub-micron Water Filter. Prior to being forwarded to the high pressure pumps, the water is filtered through a Harmsco 0.35 micron multi-element filter rated at the design flow rate. The filter housing is 304 stainless steel, pressure rate to 150 PSIG and hydrostatically tested at the factory. Polyester-Plus filter elements are easily replaced by unfastening SS wing nuts on the pump housing cover.

5.2.1.10 Flowmeter. Each skid has a flowmeter which transmits water flow information to the PLC. Low flow below 90% of rated flow will alarm per the ITN#204-00 requirement and flow below 80% of rated flow will shut down the skid. Typically we key shutdown to high and low discharge pressures off the pumps. This is a faster acting signal where time delay can eliminate spikes. We do not believe control based on flow is as precise since the flow swings up and down as stages are opened and closed. CE&E would like to discuss such control with KUA.

5.2.1.11 Isolation Valves. An isolation valve is mounted on the suction side of each pump to allow for water flow isolation during maintenance.

5.2.1.12 Gauges. The suction side of the pump(s) has a single Ashcroft (or equal) liquid filled pressure gauge. Similarly, the discharge of each pump has a liquid filled gauge but at the higher pressure range rating.

5.2.2 Nozzle Arrays

5.2.2.1 Power Fog Nozzle
The turbine inlet will have 275 proprietary impaction pin type nozzles fastened to the nozzle tubing arrays. The arrays are protected by high pressure in-line filters with 140 micron elements to guard against nozzle contamination.

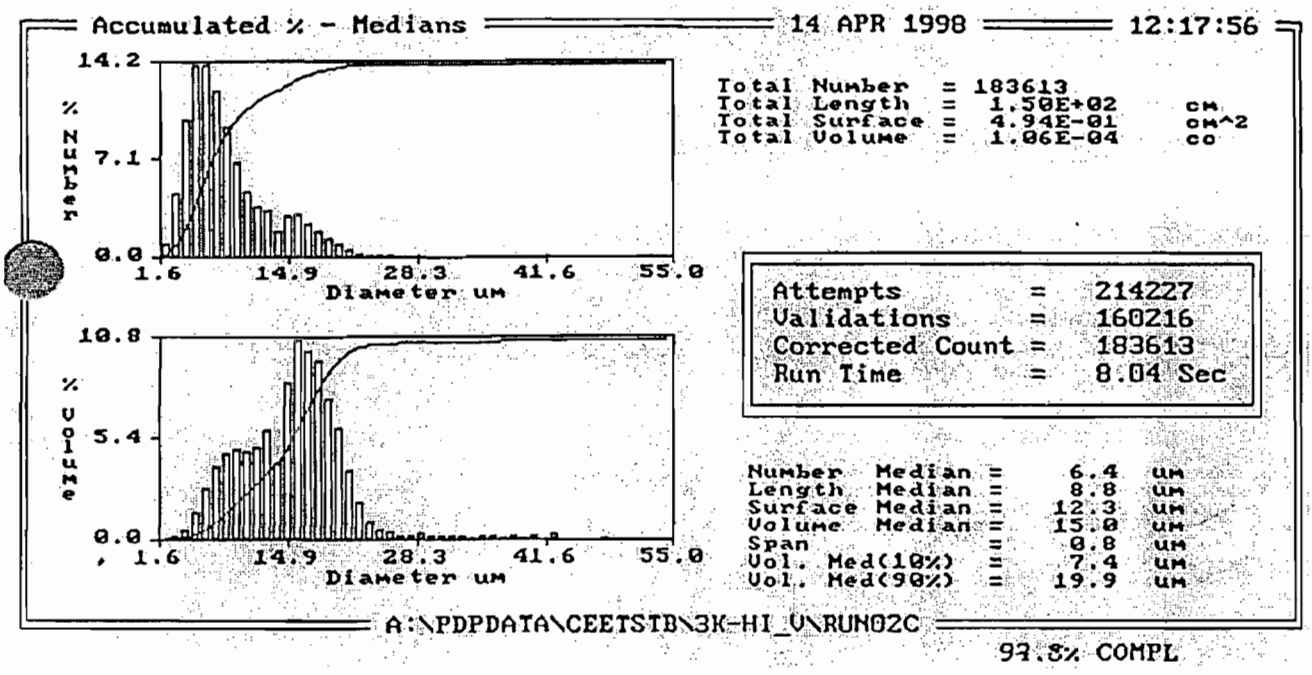
5.2.2.1.1 All stainless steel construction.

5.2.2.1.2 A lock wire hole to secure the nozzle to the manifold tubing with aircraft grade stainless steel lockwire for downstream of filter installations.

5.2.2.1.3 A 200 mesh (0.005 spacing) stainless steel screen nozzle filter provides a final barrier of protection. This screen has a longer life when compared to poly or sintered element filters.

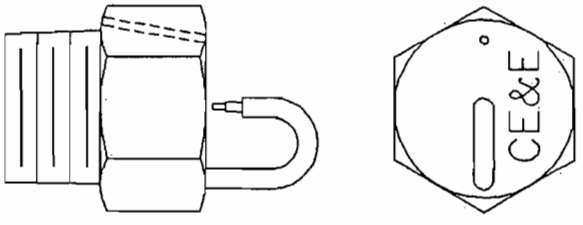
5.2.2.1.4 No whirl vanes or internal parts.

5.2.2.1.5 Optimized sizing - CE&E has chosen an orifice which provides a mass median of 15 microns (expressed here as volume). See following graphical output data.



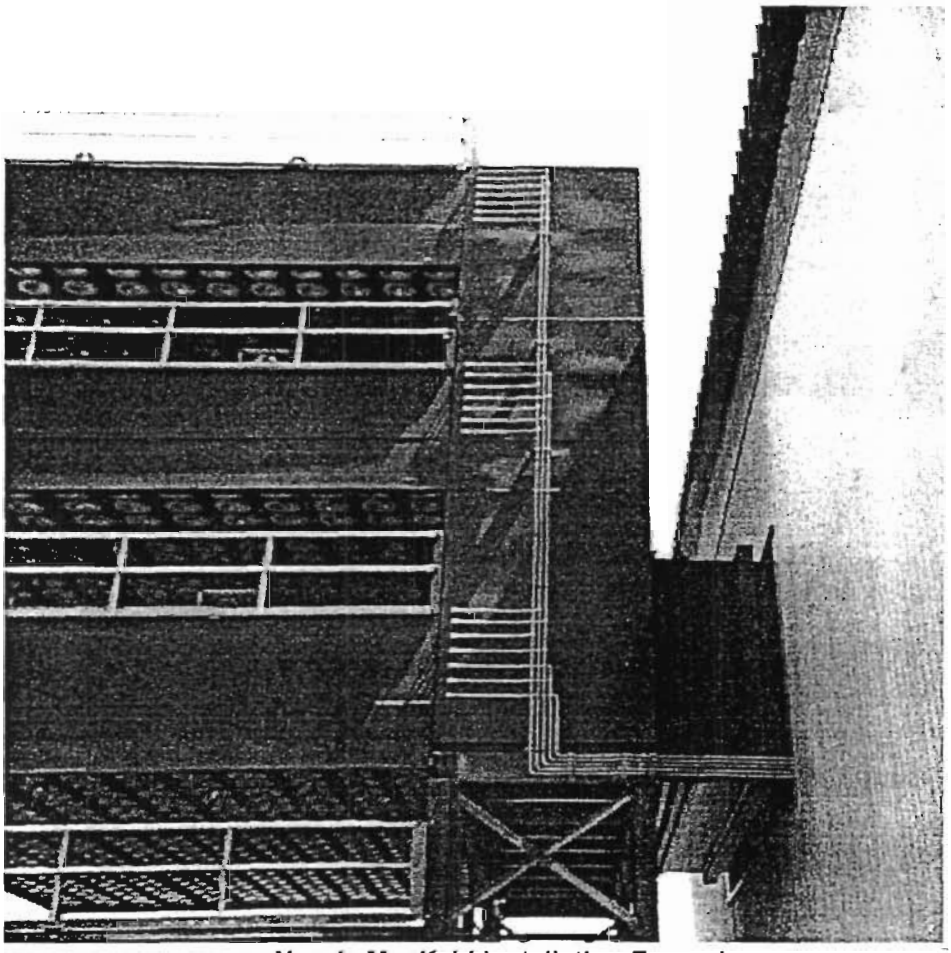
This test was performed by an independent testing lab on our nozzle using state of the art laser doppler interfermometry.

5.2.2.1.6 High strength impaction pin.



5.2.2.2 Piping Manifolds. Upstream of filter installations require mist elimination prior to the filters. When demisters are not used the nozzle manifolds are secured downstream of final filters for each turbine. This prevents filter wetting from the nozzle spray which can cause increased differential pressure drop, decreasing filter efficiency and leading to premature turbine compressor fouling. The PowerFog nozzles are fastened to a 300 series stainless steel coupling using a 1/8" NPT screw connection. The nozzles are lockwired to the manifolds for extra protection from turbine F.O.D. Each coupling is TIG welded to ½" seamless 300 series stainless steel tubing. The standard manifold length is 20 feet. The nozzle manifolds are secured, as required, to epoxy coated strut with HydrazorbTM clamps which utilize a rubber grommet to dampen any manifold vibration. All brackets, supports, and pipe hangers are included and will be securely locked in place with lockwire, lockplates, or other positive locking methods (e.g. welding). We assume the inlet filter house and duct are structurally capable of supporting the piping manifolds. Each 20' nozzle manifold is design pressure shop tested.

5.2.2.3 Manifold to Zone Interconnect. Stainless steel SwagelokTM fittings join the proper number of manifolds to meet the required flow value of each zone. All tubing sections have low point drains and/or blow out connections to facilitate winterization of the system.



Nozzle Manifold Installation Example

5.2.3 System Protection and Data Points

5.2.3.1 System Protection. Each system has a main disconnect switch which must be engaged to turn on the system. This switch is used for locklout/tagout procedures and no other control can override it. In addition to the main disconnect several parameters are measured by the control system, any one of which can shut down the system or individual pumps. These are:

System Protection Points	
Control	**Alarm(s)**
Pressure Transmitter	1 – Low suction pressure on the water supply (on/off)
Pressure Transmitter	1 – High discharge pressure on pumps (on/off)
Thermal Overload Relays	1 - Pump Motor Overload (on/off)

Flow Meter	1 – Below normal flow conditions for all zone combinations, Above Normal Flow indicating a system leak. (alarm indication & shut down)

"Fail Safe" to the closed position motorized ball valves - Low pressure conditions on the suction and discharge sides of the pumps cause the system to fault, shutting down the pumps and electrically closing the zone valves. High pressure on the discharge end of the pumps does the same. Pump motor overload protection causes the pump to shutdown. The system inherently "fails safe".

5.2.3.2 System Datapoints. The following is a list of system datapoints gathered by the PLC(s) and available to the plants DCS.

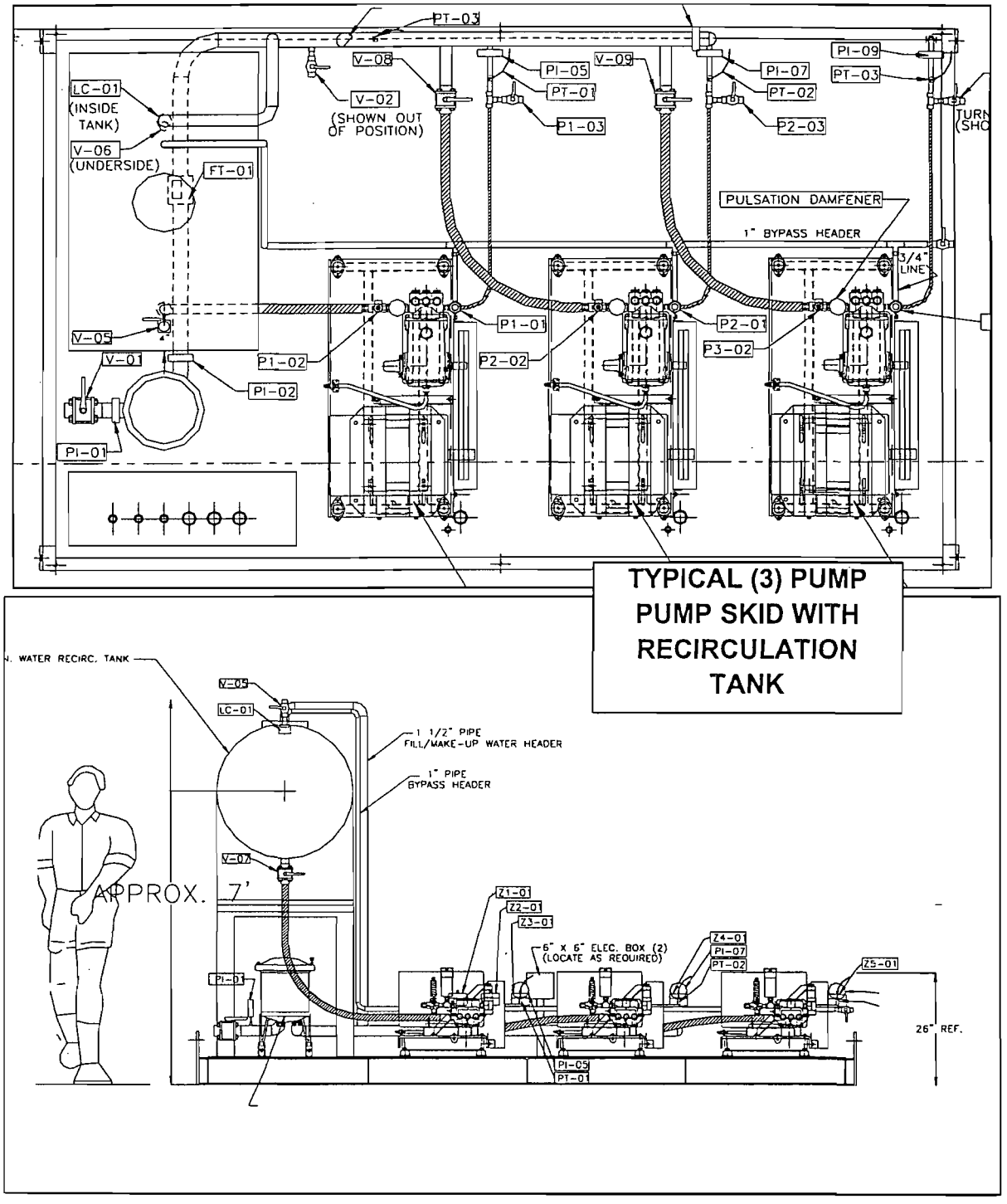
System Data Points
Ambient Dry Bulb Temperature
Ambient Wet Bulb Temperature
Rate of Flow of Water
Zone Operation
All alarm and trip functions on the skid

5.2.4 Field Installation

This proposal is for a complete PowerFog system. This includes all installation hardware and installation labor required to place the systems into operation. Supply power wiring, skid supply water piping, and control cable will be brought to the skid by the customer as stated in ITN#204-00. The boundary limits and assumptions for the installation scope are restated as:

5.2.4.1 Pump Skid Foundation. Each skid, (1) for this project, will be mounted on a permanent concrete pad provided by the customer.

A typical high pressure pump/control skid is shown below for a three pump unit. While the design and fabrication of the foundation pad are not in CE&E scope at this time, they can be negotiated at a later date if desired.



5.2.4.2 Pump Skid zones to Nozzle Manifold Interconnection. Flow from the pumps will be connected to the nozzle manifolds with up to ¾" diameter seamless stainless steel tubing.

Each interconnection shall not exceed 50 feet on the average as determined from review of KeySpan Sketch No. 1.

5.2.4.3 Water Supply Piping

The length of this supply run is not in CE&E scope of supply. The supply line to the fogging skid should be 1 1/2 to 2 inch piping, depending on available water pressure.

5.2.4.4 Power Supply Wiring

The length of this power run is not in CE&E scope of supply at this time. The line to each skid must supply 66 amps at 480 volts for the maximum flow operation condition (33 amps at 92/77 design point). Instalallation can be negotiated with CE&E at a later date if desired.

5.2.4.5 Control System Interconnect

Each fogging skid and control panel furnished shal contain terminal blocks for control wiring and shall be the point of connection for Purchaser's field wiring. Interface of the fog systems controls with plant control system (Physical tie-in to plant control system) shall involve KeySpan Energy personnel. Since specific length to the plant control system was not provided, the length of this cabling is not in scope of supply for CE&E at this time. It can be negotiated with CE&E at a later date if desired.

5.2.5 System Documentation

The following will be included with your PowerFog installation:

5.2.5.1 Installation and Erection Manual

5.2.5.2 Operations and Maintenance manual which will include documentation on all system components, system integration, a complete set of drawings and P&ID's, and instructions on proper system operation. Also included will be a complete listing of the PLCs programming.

5.2.5.3 Performance Testing Procedure

5.2.6 Spare Parts List.

The following is a list of the recommended spare parts to be kept in inventory.

System Component	Spare Part
CE&E Nozzle	Qty 5 – Included with Installation
H.P. Plunger Pump Seal Kit	Qty 1/pump – Option ($201.50 each)
H.P. Regulator Rebuild Kit	Qty 1/skid - Option ($29.80 each)

5.2.7 Performance Testing and Guarantee.

5.2.7.1 The following parameters are guaranteed by CE&E:

5.2.7.1.1 Spray capacity - no more than 25.85 GPM Max (+ .25 GPM)

5.2.7.2.2 Control functioning of the fogging system to select appropriate zones.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

June 8, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. A. K. Sharma, Director of Power Supply
Kissimmee Utility Authority
P.O. Box 423219
Kissimmee, FL 34742-3219

Re: Request for Additional Information No. 1
Project No. 0970043-008-AC (PSD-FL-182I)
KUA - Cane Island Power Park
Addition of Inlet Fogging System to Unit No. 2

Dear Mr. Sharma:

On June 6, 2000, the Department received your application and sufficient fee for an air construction permit to add inlet air fogging to Unit No. 2, a 120 MW combined cycle combustion turbine at the Cane Island Power Park. 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.

1. Please identify the proposed manufacturer, model, and description of the inlet fogging system. Is the proposed model a high-pressure direct spray system? What is the approximate water flow rate (gpm) injected to produce evaporative cooling from 95° F to 70° F under base load conditions? Please provide manufacturer specification sheets on the proposed product.

2. The original PSD permit limits heat input for gas firing to 869 mmBTU per hour and 928 mmBTU per hour for oil firing at ISO conditions and base load according to the manufacturer's design. The emission summary tables provided with the application indicate that the maximum heat input would increase to 934 mmBTU per hour for gas firing and 993 mmBTU per hour for oil firing. However, the General Electric performance curve for the Model PG7211(EA) gas turbine shows that only 90% of the design fuel consumption rate can be achieved at a compressor inlet air temperature of 95° F for both gas and oil firing. This suggests that the maximum heat input rates for gas and oil firing at 95° F would be 782 and 835, respectively. In addition, cooling the inlet air to 70° F would result in increases of the maximum fuel consumption rates to 97% of the maximum design rate or 845 and 900 mmBTU per hour for gas and oil firing, respectively. Therefore, the heat inputs would increase to:

Fuel	Design mmBTU/hour	Maximum @ 95° F mmBTU/hour	Maximum @ 70° F mmBTU/hour	Net Increase mmBTU/hour
Gas Firing	869	782 (90%)	845 (97%)	63
Oil Firing	928	835 (90%)	900 (97%)	65

The addition of the inlet foggers would not result in an increase in the design heat input rates or permit limits, which were based on ISO conditions and based load operation. Please respond.

3. Does the heat recovery steam generator for the 120 MW combined cycle gas turbine include duct firing? If so, what fuel is fired and what is the maximum heat input rate (mmBTU per hour)?
4. Attached are emissions calculations performed by the Department for the requested modification. Please review and comment.
5. Unit No. 2 was originally permitted under PSD-FL-182 issued on March 31, 1995. The addition of inlet fogging will be a modification of the PSD permit and will require a 30-day comment period with the Public Notice. Is this facility also subject to power plant site certification?

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 me at 850/414-7268.

Sincerely,

Jeffery F. Koerner, P.E.
New Source Review Section

jfk

Enclosure

cc: Mr. Jerome Guidry, Perigree Technical Services, Inc.
Mr. Len Koslov, CD
Mr. Gregg Worley, EPA
Mr. John Bunyak, NPS

KUA Cane Island Power Park
Unit No. 2 Fogging
Project No. 0970043-003-AC

NET EMISSIONS INCREASE FROM GAS FIRING W/FOGGING

			Increase ONLY[a]	Past Actuals[b]	Future Potentials[b]	Net Increase
	mmBTU/hr	---------->	63	782	845	NA
	hr/yr	---------->	8760	7799	8760	NA
Pollutant	lb/hr	lb/mmBTU	TPY	TPY	TPY	TPY
CO	54.0	0.0621	17.14	189.37	229.84	40.47
NOx	53.0	0.0610	16.83	186.01	225.77	39.75
PM10	8.7	0.0100	2.76	30.49	37.01	6.52
SO2	1.2	0.0014	0.39	4.27	5.18	0.91
VOC	2.0	0.0023	0.63	7.01	8.51	1.50

a - The isolated net increase is estimated based on the ability to fire additional fuel during hot weather than would normally be possible. The design heat input (and permit limit) for gas firing is 869 mmBTU at ISO conditions (59° F and 60% RH, LHV) as specified by the permit. According to the manufacturer's performance curve provided by the applicant, the unit would only be capable of firing 90% of the design heat input at an ambient inlet temperature of 95° F. If inlet fogging was added, the inlet temperature would be reduced to approximately 70° F and up to 97% of the design heat input could be fired resulting in a power boost for the given ambient conditions. The heat input increase is approximately 63 mmBTU per hour. Clearly, the isolated net emissions increase is less than the Significant Emissions Rates of Table 62-212.400-2.

b - The future potential emissions were based on the permit limits and continuous operation (8760 hr/yr). The past actual emissions were based on the average operation for the last two years, assuming that natural gas was the sole fuel. Although this analysis indicates that the net emissions increase approaches the Significant Emissions Rates, this unit is clearly a base load unit and the addition of the inlet fogging system could hardly be expected to increase capacity utilization. Hours of operation were reported on the Title V fee form.

NOx is the limiting pollutant.

KUA Cane Island Power Park
Unit No. 2 Fogging
Project No. 0970043-003-AC

ISOLATED EMISSIONS INCREASE FROM OIL FIRING W/FOGGING ONLY

			Fogging Increase ONLY
	mmBTU/hr[a]	---------->	65
	hr/yr	---------->	1000
Pollutant	lb/hr	lb/mmBTU	TPY
CO	65	0.0700	2.28
NOx	170	0.1832	5.95
PM10	15	0.0162	0.53
SO2	52	0.0560	1.82
VOC	5	0.0054	0.18

For this project, it was assumed that adding the inlet fogging system would not increase the likelihood of firing oil. This assumption is based on the permit condition specifying natural gas as the primary fuel with low sulfur distillate oil only to be fired if natural gas is unavailable. As further support for this assumption, Unit No. 2 operated 90% of the allowable hours (8760) over the last two years, but fired oil for only 30 hours. This worksheet is a check to ensure that the isolated increase would not result in a significant increase. As shown, the isolated increase is much less than the Significant Emissions Rates in Table 62-212.400-2.

a - The isolated net increase is estimated based on the ability to fire additional fuel during hot weather than would normally be possible. The design heat input (and permit limit) for oil firing is 928 mmBTU at ISO conditions (59° F and 60% RH, LHV) as specified by the permit. According to the manufacturer's performance curve provided by the applicant, the unit would only be capable of firing 90% of the design heat input at an ambient inlet temperature of 95° F. If inlet fogging was added, the inlet temperature would be reduced to approximately 70° F and up to 97% of the design heat input could be fired resulting in a power boost for the give ambient conditions. The heat input increase is approximately 65 mmBTU per hour. Clearly, the isolated net emissions increase is less than the Significant Emissions Rates of Table 62-212.400-2. Hours of operation were reported on the Title V fee form.

KUA Cane Island Power Park
Unit No. 2 Fogging
Project No. 0970043-003-AC

NET EMISSIONS INCREASE FROM FOGGER PROJECT

	Net Increase Gas Firing	Net Increase Oil Firing	Net Increase Total
Pollutant	TPY	TPY	TPY
CO	17.14	2.28	19.41
NOx	16.83	5.95	22.79
PM10	2.76	0.53	3.29
SO2	0.39	1.82	2.21
VOC	0.63	0.18	0.81

OPERATING HISTORY - Unit No. 2

Year	Total Hours	Gas Firing hour/year	Oil Firing hour/year
1999	8230	8229	1
1998	7368	7339	29
Average	7799	7784	15

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. A.K. Sharma, Director
KUA
PO Box 42319
Kissimmee, FL
34742-3219

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): Ben Edelen
B. Date of De: 6-12-00

C. Signature
X Ben Edelen ☐ 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) Z 341 355 308

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

Z 341 355 308

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

Sent to A K Sharma	
Street & Number KUA	
Post Office, State, & ZIP Code Kissimmee, FL	
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 6-9-00	

PS Form 3800, April 1995

0970043-008 AC
(PSD-FI-152i)

Environmental Radiation Studies
Environmental Impact Studies
Radiation Dose Modeling
Risk Assessment

Perigee
Technical Services, Inc.

Atmospheric Dispersion Modeling
Air Pollution Permitting
Landscape Design
Graphic Arts

June 5, 2000

Mr. A. A. Linero, P. E.
Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Permit Modification Request
Kissimmee Utility Authority
Cane Island Power Park - Unit 2 - Permit Number: 0970043-002-AV

Dear Mr. Linero: 0970043-008-AC

I have enclosed four (4) copies of the relevant pages of the Application for Air Permit - Title V Source to modify the above referenced permit to install an inlet fogging system to Unit 2. Please call me at (407) 333-7374 if you have any questions regarding this submittal.

Very truly yours,

PERIGEE TECHNICAL SERVICES, INC.

Jerome J. Guidry, P.E., Q.E.P.
President

JJG:emc

cc: A. K. Sharma
Jeff Ling
Larry Mattern

Enclosures

via Federal Express - Airbill number 8132 1390 6504

CC: D. Kaerner, BAR
CD
EPA
NPS

\foggermod.ltr/197.0

3214 Deer Chase Run, Longwood, Florida 32779-3173
Telephone (407) 333-7374 FAX (407) 333-9396

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: **Kissimmee Utility Authority**	
2. Site Name: **Cane Island Power Park**	
3. Facility Identification Number: **0970043**	[ ] Unknown
4. Facility Location: Street Address or Other Locator: **6075 Old Tampa Highway** City: **Intercession City** County: **Osceola** Zip Code: **34758**	
5. Relocatable Facility? [ ] Yes [**X**] No	6. Existing Permitted Facility? [**X**] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: **A. K. Sharma, Director of Power Supply**	
2. Application Contact Mailing Address: Organization/Firm: **Kissimmee Utility Authority** Street Address: **P. O. Box 423219** City: **Kissimmee** State: **Florida** Zip Code: **34742-3219**	
3. Application Contact Telephone Numbers: Telephone: **(407) 933 - 7777**	Fax: **(407) 847 - 0787**

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	June 6, 2000
2. Permit Number:	0970043-008-AC
3. PSD Number (if applicable):	
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: _____

[X] 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: 0970043-002-AV .

[ ] 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: _____

Reason for revision: _____

Air Construction Permit Application

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

[X] 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:
   A. K. Sharma, Director of Power Supply

2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: **Kissimmee Utility Authority**
   Street Address: **P. O. Box 423219**
   City: **Kissimmee** State: **Florida** Zip Code: **34742-3219**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(407) 933 - 7777** Fax: **(407) 847 - 0787**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], 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.*

   A K Sharma — Signature

   6/5/2000 — Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: **Jerome J. Guidry, P.E., Q.E.P.**
   Registration Number: **32589**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Perigee Technical Services, Inc.**
   Street Address: **3214 Deer Chase Run**
   City: **Longwood** State: **Florida** Zip Code: **32779-3173**

3. Professional Engineer Telephone Numbers:
   Telephone: **(407) 333 - 7374** Fax: **(407) 333 - 9396**

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 [X], 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.

JEROME [illegible] CERT NO. 32[illegible] STATE OF FLORIDA REGISTERED [illegible] (seal)

Signature

6-5-2000
Date

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
002	120 MW Combined Cycle Combustion Turbine	AC1D	N/A

Application Processing Fee

Check one: [ ] Attached - Amount: $_____ [X] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

   Installation of an inlet fogging system. See Attachment A for detailed information.

2. Projected or Actual Date of Commencement of Construction: **July 2000**

3. Projected Date of Completion of Construction: **July 2000**

Application Comment

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)

[X] 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).

[ ] 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.

[ ] 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)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] 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):
120 MW Combined Cycle Combustion Turbine

4. Emissions Unit Identification Number:
ID: **002**
[ ] No ID
[ ] ID Unknown

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	N/A	49	[X]

9. Emissions Unit Comment: (Limit to 500 Characters)

B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
Continuous operation of the fogger is requested.		

Attachment A

This modification request is to install an inlet water spray fogger to the Unit 2 combined cycle combustion turbine at the Kissimmee Utility Authority Cane Island Power Park in Intercession City. The installation of this unit will reduce the compressor inlet air temperature, allowing more fuel to be burned in the turbine. The reduction in inlet air temperature is accomplished by spraying a water mist into the inlet air stream. The evaporation of the fine water droplets results in adiabatic cooling of the air stream.

The installation of the fogger in and of itself does not result in an increase in air pollution emissions; the increase in emissions is due to the increase in the amount of fuel combusted. This modification request does not involve an increase in maximum permitted hourly emissions since the emission characteristics of the turbine with the fogger in operation will be similar to the emissions which would normally occur at the inlet temperatures which occur naturally without the fogger in operation. The fogger installation will involve an increase in actual emissions since the unit will operate more hours at a lower inlet air temperature, thereby increasing the amount of fuel burned during hot days.

The amount of this increase in fuel combustion can be determined using the attached performance graph provided by General Electric for the PG7111 gas turbine. This graph relates compressor inlet temperature to heat consumption. Using the attached graph, a compressor inlet air temperature of 95 degrees would translate to a heat consumption rate at 90 percent of design capacity. Assuming a maximum cooling effect of 25 degrees Fahrenheit as provided by the manufacturer, the fogger would reduce the compressor inlet temperature to 70 degrees. At this temperature, the percent heat consumption would be 97 percent, an increase in heat consumption of 7 percent.

The combustion turbine is permitted at a maximum fuel input rate of 928 mmBtu/hr when burning fuel oil and 869 mmBtu/hr when burning natural gas. At 95 degrees Fahrenheit, the actual fuel consumption would be less than this amount without the fogger installed. The fogger is estimated to increase actual fuel consumption by 7 percent of this maximum value, or about 65 MMBtu/hr.

Over the last five years, unit 2 has operated an average of 6018 hours per year; however, operating hours over the last two years averaged 7784 hours, which is more representative of the expected operation of this unit. The following tables list estimated emissions for Unit 2 burning fuel oil for the maximum allowable 1000 hours per year and burning natural gas for the remainind 6784 hours. Based on this analysis, continuous operation of the fogger will not exceed the PSD thresholds. Therefore, Kissimmee Utility Authority requests that no hourly limitation be imposed on the operation of the fogger.

Estimated Emissions from Fuel Oil Combustion

			Increase Only	Past Actuals	Future Potentials	Net Increase
		mmBtu/hr >>>>	65	928	993	
		hr/yr >>>>	1000	1000	1000	
Pollutant	lb/hr	lb/mmBtu	Ton/yr	Ton/yr	Ton/yr	Ton/yr
CO	65	0.0700	2.28	32.50	34.78	2.28
NO_x	170	0.1832	5.95	85.00	90.95	5.95
PM_{10}	15	0.0162	0.53	7.50	8.03	0.53
SO_2	52	0.0560	1.82	26.00	27.82	1.82
VOC	5	0.0054	0.18	2.50	2.68	0.18

Estimated Emissions from Natural Gas Combustion

			Increase Only	Past Actuals	Future Potentials	Net Increase
		mmBtu/hr >>>>	65	869	934	
		hr/yr >>>>	6784	6784	6784	
Pollutant	lb/hr	lb/mmBtu	Ton/yr	Ton/yr	Ton/yr	Ton/yr
CO	54	0.0621	13.70	183.17	196.87	13.70
NO_x	53	0.0610	13.45	179.78	193.22	13.45
PM_{10}	8.7	0.0100	2.21	29.51	31.72	2.21
SO_2	0	0.0000	0.00	0.00	0.00	0.00
VOC	2	0.0023	0.51	6.78	7.29	0.51

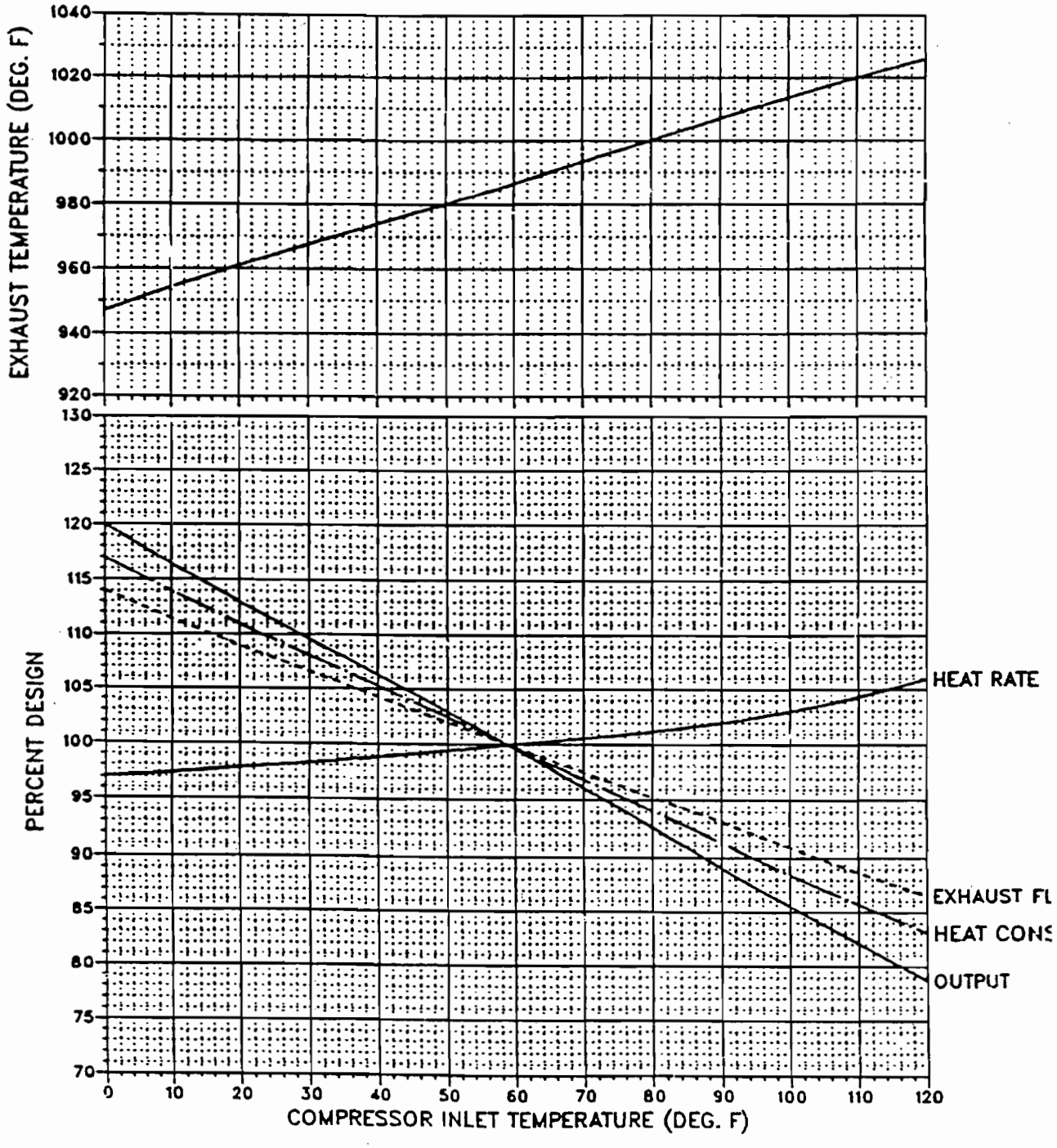
Estimated Total Emissions

Pollutant	Past Actuals	Future Potentials	Net Increase	PSD Thresholds
	Ton/yr	Ton/yr	Ton/yr	Ton/yr
CO	215.67	231.65	15.98	100
NO_x	264.78	284.18	19.40	40
PM_{10}	37.01	39.75	2.74	15
SO_2	26.00	27.82	1.82	40
VOC	9.28	9.97	0.69	40

GENERAL ELECTRIC MODEL PG7111(EA) GAS TURBINE

EFFECT OF COMPRESSOR INLET TEMPERATURE ON OUTPUT, HEAT RATE, HEAT CONSUMPTION, EXHAUST FLOW AND EXHAUST TEMPERATURE AT 100% SPEED

FUEL: NATURAL GAS AND DISTILLATE OIL
MODE: BASE LOAD



DATE 07/06/88

C.N. MULLER

CNM

499HA734

The Orlando Sentinel
Published Daily

State of Florida } S.S.
COUNTY OF ORANGE

RECEIVED

AUG 11 2000

BUREAU OF AIR REGULATION

Before the undersigned authority personally appeared Julia Nichols, who on oath says that he/she is the Legal Advertising Representative of The Orlando Sentinel, a daily newspaper published at ORLANDO in ORANGE County, Florida; that the attached copy of advertisement, being a PUBLIC NOTICE OF in the matter of 0970043-008-AC & 0970043-008-AV in the ORANGE Court, was published in said newspaper in the issue; of 07/12/00

Affiant further says that the said Orlando Sentinel is a newspaper published at ORLANDO, in said ORANGE County, Florida, and that the said newspaper has heretofore been continuously published in said ORANGE County, Florida, each Week Day and has been entered as second-class mail matter at the post office in ORLANDO in said ORANGE County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

The foregoing instrument was acknowledged before me this 13th day of July, 2000, by Julia Nichols, who is personally known to me and who did take an oath.

(SEAL)

STATE OF FLORIDA NOTARY PUBLIC
BEVERLY C. SIMMONS
My Comm Exp. 3/10/2001
Bonded By Service Ins
No. CC619266
[ ] Personally Known [ ] Other I D

cc: D. Kaimer
D. Shiplak
CD
NPS
G Worley, G. Amais, EPA

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMITS STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Project No. 0970043-008-AC: Modification of Air Construction Permit No. PSD-FL-182I
Project No. 0970043-009-AV: Revision of Title V Air Operation Permit No. 0970043-002-AV

Kissimmee Utility Authority
Cane Island Power Park
Osceola County

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit and a revised Title V major source operation permit to the Kissimmee Utility Authority for the Cane Island Power Park located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida. The applicant proposes to add an inlet air fogging system to the existing Unit 2 combined cycle combustion turbine. The system is designed to provide evaporative cooling of the compressor inlet air, which will allow a corresponding boost in power production. The applicant's mailing address is P.O. Box 423219, Kissimmee, FL 34742-3219.

The project will allow operation of the existing Unit 2 at higher levels of heat input and power output during periods of peak power demands and warm temperatures. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows performance of the combustion turbine at a lower temperature than the given ambient conditions. The existing combustion turbine remains subject to 40 CFR 60, Subpart GG, the New Source Performance Standards for stationary gas turbines.

Based on a comparison of past actual operation to future allowable operation, the Department determines that this project does not exceed the Significant Emissions Rates specified in Table 62-212.400-2, F.A.C. Therefore, the project is not subject to the requirements of Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) and no determination of Best Available Control Technology (BACT) determination is required. The analysis is detailed in the Department's Technical Evaluation and Preliminary Determination. Because PSD does not apply and maximum emissions will not increase, no air quality impact analysis was required. Emissions from the project will not consume PSD increment and will not significantly contribute to or cause a violation of any state or federal ambient air quality standards. The proposed project will not change any previous modeling demonstrations. The DRAFT air construction permit is a minor modification to the initial PSD Permit No. PSD-FL-182 and authorizes installation of the inlet air fogging system.

This public notice also includes a DRAFT Title V air operation permit, which authorizes operation of the proposed equipment. The applicant also requested that the Title V permit be updated to incorporate the modification to PSD-FL-182 by Project No. 0970043-007-AC issued on December 21, 1999. The modification established a final NOx emissions limit of 25 ppmvd for Unit No. 1, a corresponding decrease in annual hours of operation to 5000, and a combined NOx emissions cap for Unit Nos. 1 and 2 of 366.1 tons per consecutive 12 months. The DRAFT Title V Permit will revise only the applicable portions of Initial Title V Air Operation Permit No. 0970043-002-AV, including: the placard page, pages in Subsections A, B, and C of Section III (covering Emissions Units 001 and 002), Appendix H-1 (Permitting History), and Appendix S (Permit Summary Tables). Additional details regarding the Title V revisions are provided in the Department's Statement of Basis.

The Department will issue the FINAL air construction permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will issue the Title V PROPOSED Permit, and subsequent Title V FINAL Permit, in accordance with the conditions of the attached revisions to the Title V DRAFT Permit unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. Note that the FINAL air construction permit may be issued prior to the FINAL Title V air operation permit.

The Department will accept written comments concerning the proposed permit issuance actions for a period of thirty (30) days from the date of publication of this Public Notice of Intent to Issue Air Permits. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

Mediation is not available in this proceeding.

Z 341 355 308

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

Sent to A.K Sharma	
Street & Number KUA	
Post Office, State, & ZIP Code Kissimmee, FL	
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 0970043-008 AC (PSD-FL-182i)	6-9-00

PS Form **3800**, April 1995

SENDER: *COMPLETE THIS SECTION*

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- 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. A.K. Sharma, Director
KUA
PO Box 42319
Kissimmee, FL
34742-3219

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* Ben Edelen
B. Date of De' 6.12.00
C. Signature
X Ben Edelen ☐ 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)* Z 341 355 308

PS Form **3811**, July 1999 Domestic Return Receipt 102595-99-M-1789

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 •

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

RECEIVED
JUN 14 2000
BUREAU OF AIR REGULATION

01

Z 341 355 325

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to A K Sharma	
Street & Number P O Box 423219	
Post Office, State, & ZIP Code Kissimmee FL 34742-3219	
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 7/3/00	

PS Form **3800**, April 1995

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. A. K. Sharma
Director of Power Supply-KUA
P. O. Box 423219
Kissimmee, FL 34742-3219

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* Ben Edelen

B. Date of Delivery 7.11.00

C. Signature

X Ben Edelen ☐ 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)*
7 341 355 325

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UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
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• Sender: Please print your name, address, and ZIP+4 in this box •

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BUREAU OF AIR REGULATION

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

32399+6542

A person whose substantial interests are affected by the proposed permitting decision 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 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen (14) days of receipt of this notice of intent. 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 (14) days of publication of the public notice or within fourteen (14) days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen (14) days of receipt of that notice, regardless of the date of publication. 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, F.A.C.

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.

With regard to the Title V permitting action and pursuant to 42 United States Code (U.S.C.) Section 7661d(b)(2), any person may petition the Administrator of the EPA within 60 (sixty) days of the expiration of the Administrator's 45 (forty-five) day review period as established at 42 U.S.C. Section 7661d(b)(1), to object to issuance of any permit. Any petition shall be based only on objections to the permit that were raised with reasonable specificity during the 30 (thirty) day public comment period provided in this notice, unless the petitioner demonstrates to the Administrator of the EPA that it was impracticable to raise such objections within the comment period or unless the grounds for such objection arose after the comment period. Filing of a petition with the Administrator of the EPA does not stay the effective date of any permit properly issued pursuant to the provisions of Chapter 62-213, F.A.C. Petitions filed with the Administrator of EPA must meet the requirements of 42 U.S.C. Section 7661d(b)(2) and must be filed with the Administrator of the EPA at: U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: 850/488-0114

Department of Environmental Protection
Central District Office
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Telephone: 407/894-7555

The complete project file includes the application, technical evaluations, DRAFT permits, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the project engineer, Jeff Koerner, in the New Source Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

COR3407925 JULY 12, 2000

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

THRU: Clair Fancy
Al Linero

FROM: Jeff Koerner

DATE: August 15, 2000

SUBJECT: Final Permit No. PSD-FL-182I
Project No. 0970043-008-AC
KUA Cane Island Plant
Unit 2 Inlet Air Fogging System

The Final Permit is attached for your approval and signature of a project to add an inlet air fogging system to existing Unit 2 at the KUA Cane Island Plant in Osceola County, Florida. During periods of peak demand and high temperatures, the fogging system will provide evaporative cooling to allow the existing gas turbine to operate at lower inlet compressor temperatures with an increase in power output. Based on the past operating history and the information in the application, this project is not subject to PSD.

The Public Notice of Intent to Issue Permit was published in the July 12th issue of The Orlando Sentinel. As stated in the attached Final Determination, no comments on the Draft Permit were received from the public, the Central District Office, EPA Region 4, National Park Service, Fish and Wildlife, or the applicant. Only minor typographical changes were made to the Draft Permit.

I recommend your approval and signature. Day 90 for this project is November 1, 2000.

Attachments

CHF/AAL/jfk

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Kissimmee Utility Authority (KUA)
P.O. Box 423219
Kissimmee, FL 34742-3219

Permit No. 0970043-008-AC
PSD Permit No. PSD-FL-182I
KUA Cane Island Plant
Unit 2 Inlet Air Fogging System

Authorized Representative:
A.K. Sharma, Director of Power Supply

Osceola County, Florida

Enclosed is Final Permit No. PSD-FL-182I, which authorizes the installation of an inlet air fogging system for Unit No. 2 at KUA's Cane Island Plant. As noted in the Final Determination (attached), no comments were received and only minor typographical changes to the Draft Permit were made. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the 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 must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final Permit and Final Determination) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 2/21/00 to the person(s) listed:

Mr. A.K. Sharma, KUA*
Mr. Jerome Guidry, Perigree Technical Services, Inc.
Mr. Len Kozlov, Central District Office DEP
Mr. Scott Sheplak, BAR – Title V Section
Mr. Gregg Worley, EPA Region 4
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.

Charlotte J. Hayes 2/21/00
(Clerk) (Date)

INTRODUCTION

The Department distributed a public notice package on July 3, 2000 to allow the applicant to add an inlet air fogging system to Unit No. 2, an existing 75 MW gas turbine. The project is located at Kissimmee Utility Authority's Cane Island Plant in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida. The applicant published the Public Notice in the July 12th issue of The Orlando Sentinel.

COMMENTS/CHANGES

Comments from the Public and the Department's Central District Office: The Department received no comments regarding the Draft Permit.

Comments from EPA Region 4, National Park Service, and Fish and Wildlife: The Department received no comments regarding the Draft Permit.

Comments from the Applicant: The Department received no comments regarding the Draft Permit.

CONCLUSION

The final action of the Department is to issue the Final Permit with only minor typographical changes.

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

PERMITTEE

Kissimmee Utility Authority (KUA)
P.O. Box 423219
Kissimmee, FL 34742-3219

Authorized Representative:
A.K. Sharma, Director of Power Supply

Plant Site:	Cane Island Power Park
Facility ID No.	0970043
SIC No.	4911
Project No.	0970043-008-AC
Project:	Inlet Air Fogging System
Permit No.	PSD-FL-182I
Expires:	July 1, 2001

PROJECT AND LOCATION

This permit is for the installation of a high-pressure direct spray inlet air fogging system on an existing 120 MW combined cycle combustion turbine (Emissions Unit 002) at KUA's Cane Island Power Park. The plant is located in Osceola County at 6075 Old Tampa Highway in Intercession City, Florida 34758. The UTM map coordinates are Zone 17, 449.8 km East, 3127.9 km North. This permit is issued pursuant to the preconstruction review requirements of Chapter 62-212, F.A.C. The facility is an electric power generating plant and major source of air pollution with respect to Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality program. The proposed project will increase actual emissions of an existing combustion turbine. However, the net emissions increases have been determined to be less than the significant emission rates specified in Table 62-212.400-2, F.A.C. Therefore, PSD does not apply to this project.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department. This permit does not alter any requirements from previously issued air permits for the subject emissions unit.

APPENDICES

The following appendices are attached as part of this permit.

Appendix A - Terminology
Appendix B - Summary of the PSD Applicability Determination
Appendix GC - Construction Permit General Conditions

Howard L. Rhodes, Director
Division of Air Resources Management

8/17/00
Date

FACILITY DESCRIPTION

This facility consists of one 40 MW simple cycle combustion turbine, one 120 MW combined cycle combustion turbine, and two distillate oil storage tanks. The facility also has an air construction permit to install a 250 MW combined cycle combustion turbine, a natural gas-fired (44mmBTU/hour) heat recovery steam generator (HRSG), a cooling tower and a third distillate oil storage tank.

PROJECT

The proposed project adds an inlet air fogging system to the following existing emissions unit.

ARMS ID No.	EMISSION UNIT DESCRIPTION
002	Unit 2 – A 120 MW combined cycle combustion turbine

REGULATORY CLASSIFICATION

Power Plant Siting (PPS): The facilty is subject to a PPS certification.

Title III – HAP: Based on the initial Title V permit, this facility is a major source of hazardous air pollutants (HAPs).

Title IV - Acid Rain: Emissions units at this facility are subject to the Federal Acid Rain Program.

Title V – Major Source: The facility is classified as a "major" source of air pollution with respect to Title V of the Clean Air Act because emissions of at least one regulated criteria air pollutant exceeds 100 tons per year.

PSD Major Source: Because facility emissions of at least one criteria pollutant are greater than 250 tons per year, the facility is "major facility" with respect to the Prevention of Significant Deterioration (PSD) of Air Quality. Pursuant to Rule 62-212.400, F.A.C., each modification to a PSD major source requires a PSD applicability determination. The Department determined that PSD did not apply to the project as permitted.

NSPS: The existing combined cycle combustion turbine is subject to 40 CFR 60, Subpart GG, the New Source Performance Standards for stationary gas turbines.

RELEVANT DOCUMENTS

- Permit application received June 6, 2000.
- Additional information received on June 15, 2000.
- Intent to Issue Permit package mailed on July 3, 2000.
- Public Notice published in the July 12th issue of The Orlando Sentinel.
- Proof of publication received August 9, 2000.

GENERAL AND ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: All documents related to applications for permits to construct or modify this emissions unit shall be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (DEP), at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 and phone number 850/488-0114. Copies of these documents shall be submitted to each Compliance Authority.

2. Compliance Authorities: All documents related to compliance activities such as reports, tests, and notifications should be submitted to the Central District Office at 3319 Maguire Boulevard, Suite 232 in Orlando, Florida 32803-3767. The phone number is 407/894-7555 and the fax number is 407/897-2966.

3. Terminology: The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. *Appendix A* lists frequently used abbreviations and explains the format used to cite rules and regulations in this permit.

4. PSD Applicability Determination: *Appendix B* summarizes the Department's determination of PSD applicability for this project.

5. General Conditions: The owner and operator are subject to, and shall operate under, the attached General Conditions listed in *Appendix GC* of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

6. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of this project shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

7. Permit Expiration: For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C]

8. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

9. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

10. Title V Permit: This permit authorizes construction of the proposed project and initial operation to determine compliance with Department rules. Upon completion of construction of this project, a Title V operation permit revision is required for regular operation of the new equipment. The permittee shall apply for and receive a revised Title V operation permit prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Department's Central District Office at 3319 Maguire Boulevard, Suite 232 in Orlando, Florida 32803-3767. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

The proposed project adds an inlet air fogging system to the following existing emissions unit.

ARMS ID No.	EMISSION UNIT DESCRIPTION
002	**Unit No. 2** is a combined cycle gas turbine consisting of an 80 MW General Electric Model PG 7111(EA) with an unfired heat recovery steam generator (HRSG) providing an additional 40 MW. The maximum heat input is 869 mmBTU/hr when firing natural gas and 928 mmBTU/hr when firing low sulfur distillate oil. Nitrogen oxide emissions are controlled by dry low-NOx combustion design for gas firing and by water injection for oil firing. Emissions exhaust through a stack that is 75 feet above ground level. An inlet air fogging system provides evaporative cooling of the compressor inlet air.

ADMINISTRATIVE REQUIREMENTS

1. Previous Permit Conditions: This permit authorizes the installation of a new inlet air fogging system designed to lower the inlet air compressor temperature of Unit 2. The following conditions are in addition to those of original PSD Permit No. PSD-FL-182 issued for the combined cycle gas turbine. Issuance of this permit *does not* alter any requirements from any previously issued air construction or Title V operation permits.

INSTALLATION OF EQUIPMENT

2. Inlet Air Fogging System: The permittee is authorized to install a PowerFog™ high pressure, direct water spray fogging system manufactured by Caldwell Energy & Environmental, Inc. (or equivalent). The proposed equipment will inject up to 26 gpm from spray nozzles to provide evaporative cooling of the compressor inlet air to Unit 2. Based on an inlet air mass flow rate of 2,077,077 pounds per hour, the inlet air fogging system shall be designed to achieve a 25° F cooling reduction from an ambient temperature of 95° F to cooled compressor inlet air temperature of 70° F. [Design, Applicant Request]

   Permitting Note: Typically, the inlet air fogging system will operate during periods of peak power demand and high ambient temperatures. Fogging provides evaporative cooling of the inlet air to the compressor, which allows a higher mass flow rate with a corresponding increase in power production of up to 8 MW for the given ambient conditions. The increased power production is realized by firing additional fuel, which results in increased actual emissions. However, there are no increases in the maximum heat input rates, power production, or emissions levels, which are established under the coldest expected ambient temperatures. Fogging simply allows improved performance of the combustion turbine at a lower temperature than the existing ambient conditions.

3. Unconfined Particulate Emissions: During the construction period, unconfined particulate emissions shall be minimized by dust suppressing techniques such as covering, enclosing, applying water or chemicals to the affected areas, or any combination of techniques, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

PERFORMANCE REQUIREMENTS

4. Hours of Operation: Operation of the inlet air fogging system is not restricted (8760 hours per year). This is based on the PSD applicability review as summarized in Appendix B. [Design; Rule 62-212.400, F.A.C. (BACT); Rule 62-210.200, F.A.C. (Definitions - PTE)]

5. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of this permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Compliance Authority as soon as possible, but at least within one (1) working day, excluding weekends

and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

6. Circumvention: The permittee shall not circumvent any air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

7. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction, shall be prohibited. Excess emissions from the combustion turbine caused entirely or in part by the operation of the inlet air fogging system shall also be prohibited. [Rule 62-210.700, F.A.C.]

EMISSIONS PERFORMANCE TESTING

8. Special Compliance Tests: The existing Unit 2 combustion turbine remains subject to all performance testing provisions specified in any previously issued air construction and Title V operation permits. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

REPORTS

9. Excess Emissions Reporting: If excess emissions occur due to malfunction, the permittee shall notify the Compliance Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. [Rules 62-4.130 and 62-210.700(6), F.A.C.]

10. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. [Rule 62-210.370(2), F.A.C.]

SECTION IV.
APPENDIX A - TERMINOLOGY

ABBREVIATIONS AND ACRONYMS

°F	-	Degrees Fahrenheit
DEP	-	State of Florida, Department of Environmental Protection
DARM	-	Division of Air Resource Management
EPA	-	United States Environmental Protection Agency
F.A.C.	-	Florida Administrative Code
F.S.	-	Florida Statute
SOA	-	Specific Operating Agreement
UTM	-	Universal Transverse Mercator
CT	-	Combustion Turbine
DB	-	Duct Burner
HRSG	-	Heat Recovery Steam Generator
DLN	-	Dry Low-NOx Combustion Technology
SCR	-	Selective Catalytic Reduction
OC	-	Oxidation Catalyst Technology for CO Control

RULE CITATIONS

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, permit numbers, and identification numbers.

Florida Administrative Code (F.A.C.) Rules:

Example:	[Rule 62-213.205, F.A.C.]		
Where:	62	-	refers to Title 62 of the Florida Administrative Code (F.A.C.)
	62-213	-	refers to Chapter 62-213, F.A.C.
	62-213.205	-	refers to Rule 62-213.205, F.A.C.

Facility Identification (ID) Number:

Example:	Facility ID No. 099-0001		
Where:	099	-	3 digit number indicates that the facility is located in Palm Beach County
	0221	-	4 digit number assigned by state database identifies specific facility

New Permit Numbers:

Example:	Permit No. 099-2222-001-AC or 099-2222-001-AV		
Where:	AC	-	identifies permit as an Air Construction Permit
	AV	-	identifies permit as a Title V Major Source Air Operation Permit
	099	-	3 digit number indicates that the facility is located in Palm Beach County
	2222	-	4 digit number identifies a specific facility
	001	-	3 digit sequential number identifies a specific permit project

Old Permit Numbers:

Example:	Permit No. AC50-123456 or AO50-123456		
Where:	AC	-	identifies permit as an Air Construction Permit
	AO	-	identifies permit as an Air Operation Permit
	123456	-	6 digit sequential number identifies a specific permit project

APPENDIX B - SUMMARY OF THE PSD APPLICABILITY DETERMINATION

Project Description: The applicant requested a permit authorizing installation of an inlet air fogging system on the existing Unit 2 combined cycle combustion turbine at KUA's Cane Island Power Park. The project would provide an increase power output of up to 8 MW depending on the given ambient conditions. With inlet air fogging, a series of high-pressure spray nozzles add a fine mist to the compressor inlet air of the combustion turbine. The fine water droplets evaporate, absorbing heat from the air molecules during the liquid-to-vapor phase change. The cooled inlet air is made denser allowing for slightly higher air mass throughput and increased power generation. The maximum heat input continues to be defined by the coldest day, because evaporative cooling provides little or no benefit on such days. Therefore, this project does not increase permitted capacity, but rather shifts operation on hot days up the power output performance curve, but within the original design range of Unit 2. Inlet foggers are routinely included in new combustion turbine projects and have not affected the Department's decisions regarding Best Available Control Technology.

The facility is a PSD major source of air pollution and the proposed project could potentially result in significant increases in pollutant emissions of CO, NOx, PM/PM_{10}, SO_2, and/or VOC. Therefore, the project is subject to review for the Prevention of Significant Deterioration (PSD) of Air Quality. The applicant has requested no limit on operation of the foggers because emission levels for continuous operation remain below the significant emissions rates specified in Table 62-212.400-2, F.A.C. Therefore, PSD would not apply to the project and a determination of the Best Available Control Technology (BACT) is not required.

Summary of the PSD Applicability Review: The proposed project will add an inlet air fogging system designed to alter the conditions of the compressor inlet air of Unit 2. Installation of this equipment is a physical change and operation of the fogging system is considered a change in the method of operation that will result in increased actual fuel consumption and air pollutant emissions. The Department believes it is reasonable to compare the past actual to future potential emissions that would result directly from maximum heat input due to fogging. This means that the permitted emissions levels and maximum heat inputs will be used for both cases. This is consistent with the Department's previous determinations for similar inlet air fogging projects. However, critical to this analysis is the assumption that installation of this equipment will not increase the availability or utilization of the existing combustion turbine over that of recent years.

A review of the operating history for this unit indicated an average operation of 7799 hours per year for 1998 and 1999, showing Unit 2 to be a base loaded unit. Of this total, Unit 2 averaged only 15 hours per year of oil firing. Therefore, the Department does not believe that installation of this equipment would make Unit 2 more available. For the PSD applicability analysis, NOx was the limiting pollutant. The Department's comparison of past actual to future potential emissions indicated that continuously operating the foggers would result in a net emissions increase just below the NOx significant emission rate of 40 tons per year. The analysis was based on permit emissions limits, past actual operation, the assumption that all past operation was gas firing, and 8760 hours per year of potential gas firing. The result is a very conservative estimate of potential emissions because fogging is only needed during periods of peak power demand and high ambient temperatures.

As an additional check, the Department also estimated the net potential emissions increase based on 7760 hours of gas firing, 1000 hours of oil firing, permit emissions levels, and the maximum heat input due to fogging. This analysis indicates a maximum net emissions increase of just over 20 tons of NOx per year, or about half of the significant emission rate for NOx. Therefore, based on these analyses, the project is considered a minor modification with respect to PSD.

Air Quality Impact Analysis: Because PSD does not apply to this project, an Air Quality Analysis is not required. The addition of inlet air foggers is not expected to increase the maximum hourly emission rates, so there should be no change in the maximum predicted ambient impacts. Therefore, issuance of this permit would not adversely affect the results of any previous modeling scenarios.

G.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.

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

G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and 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 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.

G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment 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.

G.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.

G.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.

G.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 and 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.

G.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.

G.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,

No green card

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Mr. A. K. Sharma

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Name (Please Print Clearly) (to be completed by mailer)
Mr. A. K. Sharma, Dir. of Power Supply
Street, Apt. No.; or PO Box No.
PO Box 423219
City, State, ZIP+4
Kissimmee, FL 34742-3219

PS Form 3800, July 1999 — See Reverse for Instructions

Florida Statutes. Such evidence shall only be used to the extend it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

G.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.

G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, 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.

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

G.13 This permit also constitutes:

(a) Determination of Best Available Control Technology (not applicable to project);

(b) Determination of Prevention of Significant Deterioration (not applicable to project); and

(c) Compliance with New Source Performance Standards (not applicable to project).

G.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 or 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; and
6. The results of such analyses.

G.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.