

**SENDER:**

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

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

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:  
A.K. Sharma  
KUA  
1701 W. Carroll St.  
Kissimmee, FL  
34641-6804

4a. Article Number  
Z 031 392 005

4b. Service Type

<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Certified
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Insured
<input type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> COD

7. Date of Delivery  
11/12/99

5. Received By: (Print Name)

6. Signature: (Addressee or Agent)  
*[Signature]*

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

PS Form 3811, December 1994

102595-98-B-0229 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

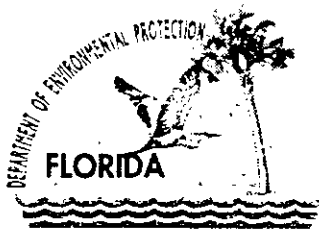
Thank you for using Return Receipt Service.

Z 031 392 005

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	11-10-99
	PSD-FI-182A Cane Island PP

Form 3800, April 1995



Jeb Bush  
Governor

# Department of Environmental Protection

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

David B. Struhs  
Secretary

November 10, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. A. K. Sharma  
Director of Power Supply  
Kissimmee Utility Authority  
1701 West Carroll Street  
Kissimmee, Florida 34741-6804

Re: DEP File No. (PSD-FL-182A)  
Cane Island Power Park

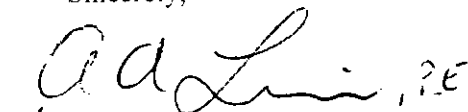
Dear Mr. Sharma:

Enclosed is one copy of the Draft Air Construction Permit Modification for Cane Island Power Park. This modification relates to changes in permitted levels of Nitrogen Oxide emissions, potential to emit (PTE) emissions, hours of operation and methods of compliance for the Cane Island Units No. 1 and 2 located in Osceola County. The Department's Intent to Issue Air Construction Permit Modification and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION" must be published within 30 (thirty) days of receipt of this letter. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit amendment.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A.A. Linero, P.E., New Source Review Section at the above letterhead address. If you have any other questions, please contact Mr. M. P. Halpin, P.E. at 850/921-9530.

Sincerely,

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

CHF/mph  
Enclosures

In the Matter of an  
Application for Permit Modification by:

Kissimmee Utility Authority  
1701 West Carroll Street  
Kissimmee, Florida 34741-6804

DEP File No. 0970043-007-AC  
Permit PSD-FL-182A  
Cane Island Power Park  
Osceola County

### INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification (copy of DRAFT Permit modification attached) for the proposed action, as detailed in the application specified above, for the reasons stated below.

The applicant, Kissimmee Utility Authority applied on September 1, 1999, to the Department for an air construction permit modification to revise the permitted NOx emission rate and hours of operation for its simple cycle combustion turbine Unit No. 1, located at the Cane Island Power Park, Osceola County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above action is not exempt from permitting procedures. The Department has determined that an air construction permit modification is required to increase the heat-input limits, megawatt rating and start-up times.

The Department intends to issue this air construction permit modification based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed. "Public Notice of Intent to Issue Air Construction Permit Modification." 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. 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 permit modification 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 accept written comments concerning the proposed permit issuance action for a period of thirty days from the date of publication of "Public Notice of Intent to Issue Air Permit Modification." 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.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. 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 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, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

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

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

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

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

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.

Executed in Tallahassee, Florida.

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

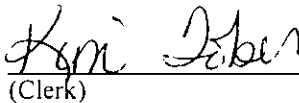
#### CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION (including the PUBLIC NOTICE, and DRAFT permit modification) was sent by certified mail (\*) and copies were mailed by U.S. Mail before the close of business on 11-10-99 to the person(s) listed:

A. K. Sharma, Kissimmee Utility Authority \*  
D. D. Schultz, P.E., Black & Veatch  
Timothy M. Hillman, Black & Veatch  
Doug Neeley, EPA  
John Bunyak, NPS  
Len Kozlov, DEP-CD

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.

  
(Clerk)

11-10-99  
(Date)

## PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Kissimmee Utility Authority, Cane Island Power Park  
DEP File No. PSD-FL-182A, 0970043-007-AC  
Osceola County

The Department of Environmental Protection (Department) gives notice of its intent to issue a modification of a Prevention of Significant Deterioration (PSD) Permit to Kissimmee Utility Authority (KUA) for its Cane Island Power Park located in Osceola County. A Best Available Control Technology (BACT) determination was required for this modification pursuant to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD). The applicant's name and address are: Kissimmee Utility Authority, 1701 West Carroll Street, Kissimmee, Florida 34741.

This is an existing facility consisting of a 40 Megawatt simple cycle combustion turbine (Unit 1) as well as a 120 Megawatt combined cycle unit (Unit 2). Both units fire natural gas and No. 2 fuel oil with gas/oil heat inputs of 367/372 and 869/928 MMBtu/hr respectively (at an ambient temperature of 59°F). These units have a Title V permit (0970043-001-AV) issued by the State of Florida.

The permitted emission rates of nitrogen oxides (NO<sub>x</sub>) for Units 1 and 2 while firing gas/oil are 25/42 ppm and 15/42 respectively. On an annual basis the permitted tons per year (TPY) of potential NO<sub>x</sub> emissions are 171.2 and 290.6 respectively. Effective January 1, 2000 the permitted NO<sub>x</sub> emission rate for Unit 1 decreases to 15 ppm while firing natural gas firing, causing the potential TPY of NO<sub>x</sub> to be equal to 116.9 (a reduction of 54.3 TPY).

KUA requests that the aforementioned NO<sub>x</sub> emission rate for Unit 1 remain at 25 ppm while firing natural gas, thereby eliminating the emission rate reduction slated for January 1, 2000. In order to ensure that the potential annual emissions (TPY) of NO<sub>x</sub> do not remain at the higher levels, further emission limits are proposed as described below. These emission limits will be accomplished by a reduction in the permitted operating hours of Unit 1 as well as an annual NO<sub>x</sub> cap for the combined operation of Units 1 and 2. No other emission limit increases are requested.

	Unit 1 potential NO <sub>x</sub> emissions	Unit 2 potential NO <sub>x</sub> emissions	Units 1 and 2 combined potential NO <sub>x</sub> emissions
As currently permitted	171.2	290.6	461.8
As permitted effective 1/1/00	116.9	290.6	407.5
As requested effective 1/1/00	103.5	290.6	366.1 (annual cap)

In addition to the above, a number of other Unit 1 pollutant emissions have the potential to be reduced. These are itemized below.

Pollutant – Tons per year (TPY)	Permitted Unit 1 Potential Emissions effective 1/1/00	Requested Unit 1 Potential Emissions effective 1/1/00	Unit 1 Potential Emissions Reductions
Particulate Matter (PM/PM10)	40.9	24	16.9
Volatile Organic Compounds (VOC)	6.9	4.3	2.6
Carbon Monoxide (CO)	193.2	121.5	71.7

It is noted that emissions from Unit 1 have ranged from 6 to 29 tons per year of NO<sub>x</sub> over a 5 year period. This reflects the peaking characteristics of the Unit. These values are less than significant for PSD and it is expected that the unit will typically operate in a similar manner in the future regardless of potential emissions.

The Department will issue the final permit modification 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 accept written comments concerning the proposed permit issuance action for a period of 14 (fourteen) days from the date of publication of "Public Notice of Intent to Issue PSD Permit Modification." 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.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. 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 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, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

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

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

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  
Fax: 850/922-6979

Department of Environmental Protection  
Central District Office  
3319 Maguire Blvd., Suite 232  
Orlando, Florida 32803-3767  
Telephone: 407/894-7555  
Fax: 407/897-2966

The complete project file includes the Draft Permit modification, the application, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

TECHNICAL EVALUATION  
PRELIMINARY DETERMINATION  
AND  
DRAFT REVISED BACT DETERMINATION

Kissimmee Utility Authority  
Cane Island Power Park  
Cane Island Unit 1  
Osceola County

DEP File No. 0970043-007-AC  
PSD-FL-182A

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

November 10, 1999



# TECHNICAL EVALUATION AND REVISED BACT DETERMINATION

## 1. GENERAL INFORMATION

### 1.1 APPLICANT NAME AND ADDRESS

Cane Island Power Park  
Cane Island Unit 1  
6075 Old Tampa Hwy  
Intercession City, Florida 33848-9999

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

### 1.2 REVIEWING AND PROCESS SCHEDULE

September 1, 1999	Received permit application and fee
September 24, 1999	Department's request for additional information
October 27, 1999	Received response to request for additional information
October 27, 1999	Application complete

## 2. FACILITY INFORMATION

### 2.1 FACILITY LOCATION

The facility is located at Intercession City, Osceola County. The UTM coordinates are Zone 17; 447.72 km E; 3127.68 km N. This site is approximately 114 kilometers from Chassahowitzka Wildlife Refuge, a Class I PSD Area.

### 2.2 STANDARD INDUSTRIAL CLASSIFICATION CODES (SIC)

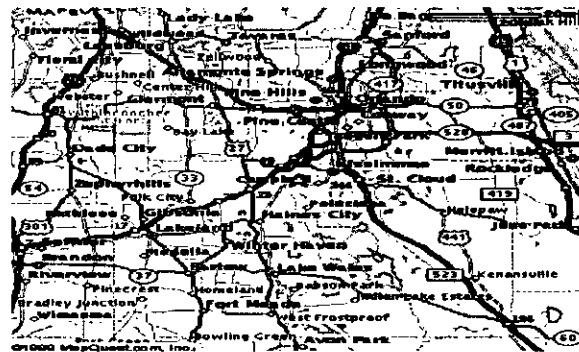
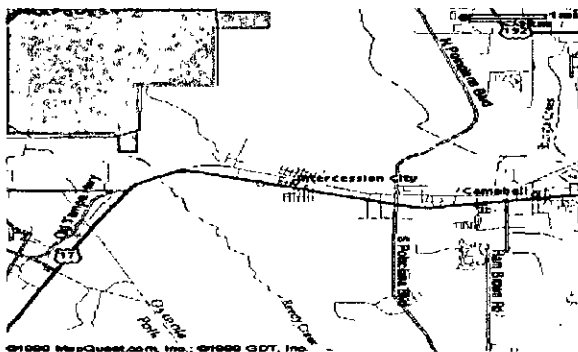
Industry Group No.	49	Electric, Gas and Sanitary Services
Industry No.	4911	Electric Services

### 2.3 FACILITY CATEGORY

The facility consists of 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 natural gas and number 2 fuel oil, with emissions exhausted through a 65 ft. stack. Additionally, 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, is capable of burning natural gas and number 2 fuel oil, with emissions exhausted through a 75 ft. stack.

This facility is classified as a Major or Title V Source of air pollution because emissions of at least one regulated air pollutant, such as particulate matter (PM/PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), or volatile organic compounds (VOC) exceeds 100 tons per year (TPY).

This facility is within an industry included in the list of the 28 Major Facility Categories per Table 62-212.400-1, F.A.C. Because emissions are greater than 100 TPY for at least one criteria pollutant, the facility is also a Major Facility with respect to Rule 62-212.400, Prevention of Significant Deterioration (PSD). This facility is a major source of hazardous air pollutants (HAPs) and is also subject to the provisions of Title IV, Acid Rain, Clean Air Act. as amended in 1990.



# TECHNICAL EVALUATION AND REVISED BACT DETERMINATION

### 3. PROJECT DESCRIPTION

This project addresses the following emissions unit(s):

Emissions Unit No.	Emissions unit Description
001	GE LM6000PA 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 (0.05% S).

The applicant proposes to maintain its current NO<sub>x</sub> emission rate of 25 ppmvd while firing natural gas. This emission rate is currently required to be reduced to 15 ppmvd on January 1, 2000. The original BACT and construction permit had required this reduction to occur by January 1, 1998. However, through two separate permit extensions of one year each (the last being 0970043-005-AC), this requirement has been set at January 1, 2000 and is reflected in the Title V permit as a specific requirement. No changes to the permitted NO<sub>x</sub> emission rate of 42 ppmvd while firing 0.05% S oil, the permitted emission rate of other pollutants, nor the permitted hours of oil operation are included within the applicant's request.

### 4. PROJECT EMISSIONS

The following table summarizes the potential maximum emissions increases of nitrogen oxides, comparing past actual to future potential emissions in TPY:

Year	Past Actual	Future Potential	Maximum Emissions Change	PSD Significance Level <sup>1</sup>	Subject to PSD Review?
1998	13.77				
1997	10.55				
1996	5.80				
1995	29.20				
1994	12.94				
5 year average	14.5	171.2*	156.7	40	Yes

\* Based upon 25 ppm for 7760 hours/year (gas operation) and 42 ppm for 1000 hours/year (oil operation)

<sup>1</sup> Florida Administrative Code 62-212.400-2.

The proposed project will result in "significant increases" with respect to Table 62-212.400-2, F.A.C., of emissions of nitrogen oxides (NO<sub>x</sub>). The project is therefore subject to review for the Prevention of Significant Deterioration (PSD) and a determination of Best Available Control Technology (BACT) in accordance with Rules 62-212.400, F.A.C.

Both Units 1 and 2 have begun normal operations. Yet, it is evident from the historical data, that Unit 1 has not even emitted NO<sub>x</sub> at annual rates in excess of 40 tons per year (the significant emission rate). The KUA proposal does not include any physical changes or changes in method of operation that are likely to actually increase utilization of the units. This fact does not exempt the proposal from PSD review because it is necessary to calculate the increases by subtracting past actual emissions from future potential emissions when considering simple cycle units.

Nevertheless a previous reference to the procedure was made in the Puerto Rican Cement Decision. This is the watershed Federal Circuit Court of Appeals decision that upheld the past actual-to-potential emission comparison applicable to (at least) modernization projects. The comments of interest for the purposes of the present review are as follows:

*"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*

# TECHNICAL EVALUATION AND REVISED BACT DETERMINATION

---

*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."*

KUA's proposal does not replace a unit or modify it in any way. At the same time, KUA is not trying to avoid a BACT determination. However some consideration can be given for their proven status as a peaking unit. They are obviously reluctant, as in the example cited above, to shrink the unit (or the "modification" to a minor source) by an excessively stringent limit on hours of operation.

## 5. RULE APPLICABILITY

The proposed project is subject to preconstruction review requirements under the provisions of Chapter 403, Florida Statutes, and Chapters 62-4, 62-204, 62-210, 62-212, 62-214, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.).

This facility is located in an area designated, in accordance with Rule 62-204.340, F.A.C., as attainment for all pollutants.

Rule 62-4.030, F.A.C., prohibits modification of any existing emissions unit without first receiving a permit. It further specifies that a permitted installation may only be modified in a manner that is consistent with the terms of such a permit. Rule 62-210.200, F.A.C., defines "modification" to mean generally a change that results in an increase in actual emissions of regulated air pollutants. Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C., also reiterate the requirement for construction permits. As noted above, future potential emissions were estimated based on unrestricted operation of the emissions units. The emission units affected by this permit shall comply with all applicable provisions of the Florida Administrative Code (including applicable portions of the Code of Federal Regulations incorporated therein) and, specifically, the following Chapters and Rules.

### 5.1 STATE REGULATIONS

Chapter 62-4	Permits
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.800	Federal Regulations Adopted by Reference
Rule 62-210.200	Definitions
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions
Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Rule 62-212.410	Best Available Control Technology (BACT)
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-214	Requirements For Sources Subject To The Federal Acid Rain Program
Rule 62-296.320	General Pollutant Emission Limiting Standards

# TECHNICAL EVALUATION AND REVISED BACT DETERMINATION

## 5.2 FEDERAL RULES

40 CFR 60	Applicable sections of Subpart A, General Requirements
40 CFR 72	Acid Rain Permits (applicable sections)
40 CFR 73	Allowances (applicable sections)
40 CFR 75	Monitoring (applicable sections including applicable appendices)
40 CFR 77	Acid Rain Program-Excess Emissions (future applicable requirements)

## 6. AIR POLLUTION CONTROL TECHNIQUES

The applicant proposed to control NO<sub>x</sub> emissions through a limitation on operating hours. Following is a summary of the available control techniques for this project.

### 6.1 APPLICANT CONTROL TECHNOLOGY (BACT) PROPOSAL

POLLUTANT	CONTROL TECHNOLOGY	PROPOSED LIMIT
Nitrogen Oxides	Limit hours of operation	5000 hrs/yr (Natural gas at 25 ppmvd) of which up to 1000 hrs may be on #2 oil (at 42 ppmvd)

### 6.2 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

The minimum project control technology basis is 40 CFR 60, Subpart GG, Standards of Performance for Stationary Gas Turbines (NSPS). Subpart GG was adopted by the Department by reference in Rule 62-204.800, F.A.C. The key emission limit required by this subpart is 75 ppmvd NO<sub>x</sub> at 15% O<sub>2</sub>. The BACT proposed by KUA is consistent with the requirements of this subpart. No National Emission Standards for Hazardous Air Pollutants exist for this project.

### 6.3 NITROGEN OXIDES (NO<sub>x</sub>) EMISSIONS

Nitrogen oxides form in the combustion process as a result of the dissociation of molecular nitrogen and oxygen to their atomic forms and subsequent recombination into seven different oxides of nitrogen. Thermal NO<sub>x</sub> forms in the high temperature area of the combustor. Thermal NO<sub>x</sub> increases exponentially with increases in flame temperature and linearly with increases in residence time. Flame temperature is dependent upon the ratio of fuel burned in a flame to the amount of fuel that consumes all of the available oxygen. Fuel NO<sub>x</sub> is formed when fuels containing bound nitrogen are burned. This phenomenon is not important when combusting natural gas because natural gas has little or no fuel nitrogen. It is noteworthy that the LM6000PA aeroderivative machines employ very high compression ratios with correspondingly high flame temperatures. Accordingly, the ability to maintain a NO<sub>x</sub> emission rate of less than 25 ppm while firing natural gas has not been demonstrated without the use of SCR (see attached "LM6000 Fleet Emission Data").

Control techniques for NO<sub>x</sub> that are applicable to this project are itemized below and form the underpinnings for this BACT Determination:

CONTROL TECHNOLOGY	TECHNICALLY FEASIBLE	ECONOMICALLY FEASIBLE	BACT
Hot SCR	Yes	No - \$6,794/ton*	No
GE SPRINT Technology	No - LM6000PC Only	N/A	No
Maximum Water Injection	No; Current Practice – Yields emissions just under 25 ppm	N/A	No

\*Note: Based upon 126 TPY reduction (8760 operating hours) and \$856,000 annual cost.

# TECHNICAL EVALUATION AND REVISED BACT DETERMINATION

## 6.4 DEPARTMENT BACT DETERMINATION

The Department has determined that no hardware solution is both technically and economically feasible and therefore intends to impose BACT via administrative measures rather than requiring control changes. The table below forms the basis of this determination:

	Unit 1 potential NO <sub>x</sub> emissions	Unit 2 potential NO <sub>x</sub> emissions	Units 1 and 2 combined potential NO <sub>x</sub> emissions
As currently permitted	171.2	290.6	446.0
As currently permitted 1/1/00	116.9	290.6	407.5

The Department notes that KUA Cane Island Number 2 routinely operates below its 15 ppm NO<sub>x</sub> limit with something more than an adequate operating margin. Accordingly, it is reasonable that the potential to emit (PTE) for Unit 2 may be adjusted downward to further accommodate the Unit 1 request. In order to make this reduction in a fashion that allows for operational flexibility at the facility, a NO<sub>x</sub> cap will be imposed that incorporates both Units 1 and 2. This further reduction is calculated based upon the premise that the Unit 1 operating hours are reduced to 5000 per year (with oil-firing provisions) as requested by KUA, but that the gas-firing hours should be at an emission rate equivalent to 15 ppm rather than 25 ppm. The Department calculates that difference to be equal to 28 TPY. Therefore, the BACT is determined to be:

	Unit 1 potential NO <sub>x</sub> emissions	Unit 2 potential NO <sub>x</sub> emissions	Units 1 and 2 combined potential NO <sub>x</sub> emissions
As currently permitted	171.2	290.6	446.0
As currently permitted 1/1/00	116.9	290.6	407.5
BACT Determination	75.5 <sup>♣</sup>	290.6	366.1

♣ Equivalent limit based upon 4000 hours of gas operation (15 ppm) and 1000 hours of oil operation (42ppm). Unit 1 annual emissions may be as high as 103.5 TPY (28 TPY higher) provided that the combined emissions of 366.1 TPY are not exceeded.

The Department notes that Unit 1 has averaged 14.5 TPY of NO<sub>x</sub> emissions, indicating that this BACT Determination authorizes an increase equivalent to 61 TPY (75.5 minus 14.5) which exceeds the PSD significance level by a mere 21 TPY.

In addition to the PTE reductions noted above, placement of the 5000 hours operating limit on Unit 1 causes coincidental decreases of the PTE for other pollutants, most notably a CO reduction of over 70 TPY.

## 6.5 ADDITIONAL COMPLIANCE PROCEDURES

Pollutant	Compliance Procedure
Unit 1 NO <sub>x</sub> (30-day average)	NO <sub>x</sub> CEMS data used for compliance with cap
Unit 2 NO <sub>x</sub> (30-day average)	NO <sub>x</sub> CEMS data used for compliance with cap

The NO<sub>x</sub> emissions from these units shall be added together each month and form the basis for the 12 month NO<sub>x</sub> cap. A specific permit condition shall describe this calculation.

# **TECHNICAL EVALUATION AND REVISED BACT DETERMINATION**

---

## **7. SOURCE IMPACT ANALYSIS**

An ambient air quality impact assessment was done in support of the original PSD application dated June 1992. Emissions modeled for that submittal were under the scenarios of 8760 hours per year operation of each fuel (natural gas and 0.3% Sulfur oil). The NO<sub>x</sub> emission rates modeled for that assessment were at 25/42 (gas/oil) ppmvd. Since this Determination results in emissions that are less than or equal to the original modeling work, no further modeling is required.

## **8. CONCLUSION**

Based on the foregoing technical evaluation of the application and additional information submitted by the applicant and other available information, the Department has made a preliminary determination that the proposed project as outlined by the Department's BACT Determination will comply with all applicable state and federal air pollution regulations.

**LM6000 Fleet Emission Data**

LM6000 Config	Owner	Site Name	Location	Type	Emissions NOx (ppm)
PA-NDW	Energy Initiatives	Lake 2	Umatilla, FL	CC/Cogen	25
PA-NDW	Energy Initiatives	Pasco 2	Dade City, FL	CC/Cogen	25
PA-NDW	Energy Initiatives	Pasco 1	Dade City, FL	CC/Cogen	25
PA-NDW	Energy Initiatives	Lake 1	Umatilla, FL	CC/Cogen	25
PA-NGS	TransAlta	Trans Alta #1	Ottawa, Canada	CC/Cogen	42
PA-NGS	Trans Alta	Trans Alta #GE-101	Mississauga, Canada	CC/Cogen	42
PA-NDW	US Generating	E Syracuse 1	E. Syracuse, NY	CC/Cogen	
PA-NDW	US Generating	E Syracuse 2	E. Syracuse, NY	CC/Cogen	
PA-NGW	Hutchinson Utilities Comm	City of Hutchinson	Hutchinson, MN	SC/	25
PA-NGS	TransAlta	Trans Alta #GE-102	Mississauga, Canada	CC/Cogen	42
PA-NDW	KIAC Partners -	Kennedy Airport 1	Queens, NY	CC/Cogen	25 (to 42 with water)
PA-NDW	CEA/Brooklyn Union Gas	Kennedy Airport 2	Queens, NY	CC/Cogen	25 (to 42 with water)
PA-NGS	Florida Power Corp	U of Florida	Gainesville, FL	CC/Cogen	25
PA-NDW	Lake Superior	Union Energy #1	Sault St. Marie, Ont	CC/Cogen	Dry
PA-NDW	Northeast Utilities	South Meadow Station	Hartford, Connecticut		
PA-NGW	Lake Superior Power	Union Energy #2	Sault St. Marie, Ont	CC/Cogen	Dry
PA-NGS	Thermo	Ft. Lupton A (lease-107)	Ft. Lupton, CO	CC/Cogen	42
PA-NGW	Las Vegas Cogen, LP	Las Vegas Cogen	Las Vegas, NV	CC/Cogen	60
PA-NGS	Thermo	Ft. Lupton C (lease-138)	Ft. Lupton, CO	CC/Cogen	42
PA-NDW	CEA Nissequogue	SUNY	Stony Brook, NY	CC/Cogen	25
PA-NDW	Cogen Partners of America	Progresso Foods	Vineland, NJ	CC/Cogen	60
PA-NDW	Kissimmee Util. Authority	Kissimmee	Kissimmee, FL	SC	25(gas)/42(liq)
PA-NGS	Thermo	Ft. Lupton B	Ft. Lupton, CO	CC/Cogen	42
PA-NGS	Thermo	Ft. Lupton D	Ft. Lupton, CO	CC/Cogen	42
PA-NGS	Thermo	Ft. Lupton E	Ft. Lupton, CO	CC/Cogen	42
PA-NGW	Kamine/Besicorp Allegany		Hume, NY	CC/Cogen	65 (9 w/ SCR)
PA-NGW		Thermo Monfort			
PA-NDW	Sithe Energies	AG Energy	Ogdensburg, NY	CC/Cogen	75 (9 w/ SCR)
PA-NDW	S.M.U.D.	Carson Energy #1	Elk Grove, CA	CC/Cogen	
PA-NGW	Arroyo Energy	Goal Line Operations	Escondido, CA	CC/Cogen	42 (5 w/SCR)
PA-NGW	S.M.U.D.	Carson Energy #2	Elk Grove, CA	Peaker	
PA-NDW	OMPA	Ponca City Stream Unit #1	Ponca City, Oklahoma		25 (gas)/65(liq)
PA-NDW	Willamette Industries, Inc.	Albany Paper Mill	Albany, Oregon	CC/Cogen	
PA-NGWG03	Northeast Utilities	Devon Station	Connecticut		
PA-NGSG03	Northeast Utilities	Devon Station	Connecticut		
PA-NDW	Potter Power	Potter Power	Tunis, Canada	CC/Cogen	Dry
PA-NGWP06	Northland Power	Iroquois Falls	Iroquois Falls, Canada	CC/Cogen	Dry
PA-NGWP06	Northland Power	Iroquois Falls	Iroquois Falls, Canada	CC/Cogen	Dry
	S.M.U.D.	P&G	Sacramento, CA	SC & CC	5 w/SCR
PA-NDWG07	Northeast Utilities	Devon Station	Connecticut		
	Northeast Utilities	Devon Station	Connecticut		
PB-NGD	CSW/ARK 1	Orange Cogen	Bartow, FL	Cogen	25
PB-NGD	CSW/ARK 2	Orange Cogen	Bartow, FL	Cogen	25
PB-NGDG08	TransAlta	Windsor			
PD	Lubbock Power & Light		Lubbock, TX	CC	15 w/SCR
PD	Black Hills Power & Light	Neil Simpson Station II	Wyodak, WY	SC	Proposed -25
PD	Black Hills Power & Light	Lange Combustion Turbine Facility	Rapid City, SD	SC	Proposed -25

December xx, 1999

Mr. A. K. Sharma  
Director of Power Supply  
KUA –Cane Island Power Park  
1701 West Carroll Street  
Kissimmee, Florida 34741-6804

Re: DEP File No. 0970043-007-AC; Modification of Permit No. PSD-FL-182A  
Cane Island Power Park / Osceola County

The applicant, Kissimmee Utility Authority, applied on September 1, 1999, to the Department for a modification to air construction permit number PSD-FL-182A for its Cane Island Power Park located in Osceola County. The modification is to allow the 40 Megawatt Unit 1 to continue to operate at its permitted NO<sub>x</sub> emission rate of 25 ppm, eliminating the requirement to reduce this emission rate to 15 ppm on 1/1/2000. The Department has reviewed the modification request. The referenced permit is hereby modified as follows:

**Specific Condition No. 3:**

This source is allowed to operate ~~continuously (8760 hours per year)~~ as follows:

- 1) 40 MW Simple Cycle Turbine – up to 5000 hours per year.
- 2) 120 MW Combined Cycle Turbine – up to 8760 hours per year.

**Specific Condition No. 4:**

(deleted and replaced as follows):

The only fuel(s) allowed to be burned are natural gas and number 2 fuel oil (0.05%). The firing of number 2 fuel oil (within the 5000 hour annual limitation) 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.

**Specific Condition 15b and Table 1, Note B:**

The 40 MW simple cycle unit (LM6000PA) shall achieve a maximum NO<sub>x</sub> emission level of ~~±525(gas)/42(oil) ppmv by 1/1/2000.~~ Emissions units number 1 and 2 are required to comply with an annual NO<sub>x</sub> cap of 366.1 tons. In order to comply with this cap, monthly NO<sub>x</sub> emissions as recorded by the installed CEMS shall be maintained at the facility. These records shall demonstrate that the cap is complied with during each consecutive 12-month period. Additionally, the annual submittal of each AOR shall include such data and calculations.



A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., 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.

\_\_\_\_\_  
Howard L. Rhodes, Director  
Division of Air Resources  
Management

**CERTIFICATE OF SERVICE**

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

A. K. Sharma, Kissimmee Utility Authority \*  
D.D. Schultz, P.E., Black & Veatch  
Timothy M. Hillman, Black & Veatch  
Doug Neeley, EPA  
John Bunyak, NPS  
Len Kozlov, DEP-CD

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.

\_\_\_\_\_  
(Clerk)

\_\_\_\_\_  
(Date)

Florida Department of  
Environmental Protection

Memorandum

TO: Clair Fancy  
THRU: Al Linero  
FROM: Michael P. Halpin  
DATE: November 9, 1999  
SUBJECT: Kissimmee Utility Authority Cane Island Power Park  
Modification to NO<sub>x</sub> limitation on Unit 1  
DEP File No. 097043-007-AC (PSD-FL-182A)

*They need finalized by 11/1/2000.*  
*Clair - I handled for you as obviously we both are extremely busy.*  
*Mike discussed approach with EPA who had "no problem" with it. That is not to say they absolutely won't later, but*

Attached is the public notice package for a modification to the PSD permit for Units 1 and 2 at KUA's Cane Island Power Park. The existing facility is comprised of two units, each of which is permitted to operate 8760 hours. Unit 1 is a 40 MW GE LM6000PA simple cycle aeroderivative combustion turbine-electrical generator. Unit 2 is a nominal 80 MW GE 7EA combustion turbine-electrical generator, with a HRSG and steam turbine-electrical generator capable of producing another 40 MW.

*we have good reason to believe it will be OK. 5 year averaging from units have*

Unit 2 was required to meet a NO<sub>x</sub> limit of 15 (gas)/42 (oil) ppmvd. It easily met these values and reportedly achieves between 7 and 10 ppmvd while burning gas. Unit 1 was required to "attempt to achieve a maximum NO<sub>x</sub> emission level of 15 (gas)/ 42 (oil) ppmv by 1/1/98." If unable to meet these levels during compliance testing (presumably well before 1/1/98), KUA was required to provide estimated compliance dates and update them on an annual basis. After 1/1/98, the Department "may require SCR be installed since the exhaust temperature has an acceptable range for SCR installation."

*averaged 14.5 TPY only.*

Instead of requiring SCR after 1998, the Department inserted a date-certain for compliance with the 15 ppmvd limit when firing gas. The first date was 1/1/99 and it was extended again to 1/1/00. The applicant has determined that no technical solution exists, short of SCR. However they do not want to install SCR and have requested revision of the permit to allow continued operation of Unit 1 at 25 ppmvd while firing gas.

A revised BACT is attached, which evaluates the feasibility of an SCR installation. The applicant's BACT proposal concludes that SCR is not cost effective (>\$10,000 per ton) and recommends an annual operating hour limitation (5000 hours per year) which yields annual NO<sub>x</sub> emissions equivalent to the lower requirement. GE has advised that there are no further improvements planned for the LM6000PA and they did not guarantee the unit to meet the limits we originally recommended. Our initial recommendation was probably based on an expectation that GE would be able to achieve lower emissions by DLE and the fact that the unit was permitted to operate continuously.

*Al*

My analysis has also determined that SCR is not cost effective. As mentioned, Unit 2 is routinely emitting NO<sub>x</sub> emissions below the permitted rate of 15 ppmv. Accordingly, I am recommending annual PTE reductions (beyond the applicant's proposal) of 28 TPY via a Nitrogen Oxides (NO<sub>x</sub>) emissions cap of 366.1 TPY, which includes Units 1 and 2. The NO<sub>x</sub> cap referenced in the Draft permit will use CEMS as the compliance tool and require annual reporting. You should be aware that the original PSD application (1992) included modeling for 8760 hours of operation at 25 (gas)/42 (oil). Since I am recommending pollutant emission levels which are less than what was modeled in 1992, I have not required additional modeling.

I recommend your approval of the attached Intent to Issue. Although Day 90 does not occur until 1/24/00, the existing permit (which requires the NO<sub>x</sub> reduction) expires on 12/31/99. In order for this Draft permit to be effective on 1/1/00, the Notice will need to be published by 11/17/99.

AAL/mph  
Attachments