



GE Power Generation

Global Power Plant Systems Department
General Electric Company
One River Road, Schenectady, NY 12345
518-385-7222

11 October, 1996

Subject: Kissimmee Utility Authority
Cane Island No. 1
DLE upgrade

RECEIVED

OCT 16 1996

POWER SUPPLY DEPT.

Mr. A. K. Sharma
Power Supply Department
Kissimmee Utility Authority
P.O.Box 423219
Kissimmee, Florida 34742

Dear Ben:

GE is aware that Kissimmee Utility Authority (KUA) Cane Island No. 1 Gas Turbine is currently permitted to operate at the Allowable Emission Rate of 25 ppmvd on Gas and 42 ppmvd on Oil. The BACT Determination section of the permit states that "the department has accepted the water injection (LM6000) and the 25 ppmvd (natural gas) /42 ppmvd (oil) at 15%O₂ as BACT for a limited time (up to 1/1/98)". The permit also states that "the manufacturer will attempt to achieve a maximum NO_x emission level of 15 (gas)/42 (oil) ppmvd by 1/1/98," and that "should this level of control not be achieved..... the permittee must provide the Department with expected compliance dates which will be updated annually."

The BACT Determination further states that "it is the Department's understanding that General Electric is developing programs for....the LM6000, to achieve a NO_x emission control level of 9 ppm when firing natural gas. The Department has determined that the following BACT will apply....

b) For the simple cycle unit (LM6000), the manufacturer will attempt to achieve a maximum NO_x emission level of 15(gas)/42(oil) ppmvd by 1/1/98. Should this level of control not be achieved, the permittee must notify the Department of the expected compliance date by 1/1/97."

This letter is to inform you that the GE DLE development program is not currently in a position which would allow us to provide a dry low emission (DLE) retrofit package for the LM6000 at Cane Island to meet the requirements of your air permit by the 1/1/98 date.

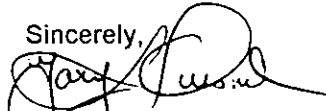
GE has undertaken programs to develop the technology for reducing the emissions of the GE gas turbines to the levels listed in your permit and beyond. These are complex and lengthy programs and the progress estimates provided to KUA at the time of the establishment of your permit were based on what we knew then. GE has embarked on these programs for both the heavy duty frame type machines manufactured by GE Power Generation and the aeroderivative type turbines manufactured by the Marine and Industrial Engine Division(M&I) of GE Aircraft Engines. Although the programs have been able to take advantage of achievements in each other's progress, the programs have developed separately due to differences in the equipment and technologies.

There may be some confusion regarding retrofit availability for GE gas turbines with dry low NOx (DLN) combustors because of the dual development programs that GE is conducting. The GE dry low NOx (DLN) development program for our heavy duty frame units is two to three years ahead of the LM 6000 DLE program. DLN retrofit packages for existing heavy duty frame units with steam or water injection are available for some Frame 3, 6B and 7EA gas turbines. In addition, there may be some new frame 7EAs and 7F/FA machines retrofit with advanced DLN combustors. The nature of any combustion development program is such that a database of experience must be established from units operating in commercial service before the advanced (lower NOx) combustor can be made available. In such cases, regulatory agencies have allowed units to go into commercial operation with higher NOx levels with a goal of lower levels in the future. In such cases (for frame units), retrofits of lower NOx combustor may have been committed. The key point to note, however, is that the heavy duty gas turbine DLN program has been successful in meeting its goals and is at least two to three years ahead of the LM DLE program.

GE remains committed to the DLE and DLN development programs for both aeroderivative and heavy duty type gas turbines. No firm date has yet been established for retrofit availability for existing or new LM6000 units; however, key milestone tests significant to the development process are scheduled to be completed during the first half of 1997. Once these tests have been completed, GE will have a firm plan established and will be able to advise KUA as to when the retrofit package for Cane Island No. 1 will be available.

GE will support KUA as necessary in petitioning the Florida DER to allow the Air Permit for Cane Island to be amended such that the required date for operation at 15 ppmvd(gas) and 42 ppmvd(oil) be changed from 1/1/98 to 1/1/99 initially. The change will then bring the permit in line with the state of advancement in technology development of the DLE program. Please contact me with what actions that KUA would like GE to take in the future in this regard.

Sincerely,



Gary L. Quesnel
Project Manager

cc: H. Jacobs B&V
 D. Swanson GE
 J. Such GE